THE BUILDER

INCORPORATING

"ARCHITECTURE" AND "THE BRITISH ARCHITECT"

Vol. CLV NOVEMBER 4 1938 No. 4996

"ADELPHI."

This view of the Adelphi, opened on Monday, shows the staircase tower above the Adam-street entrance. The vertical window, approximately 61 ft. high by 6 ft. wide, is glazed with special light-distributing lenses, set in reconstructed stone mullions. The architects are Messrs. Collcutt and Hamp.

COMING EVENTS

Monday, November 7.

Royal Institute of British Architects. Presidential Address by Mr. H. S. Goodhart-Rendel. Presentation of the London Architecture Bronze Medal, 1937, to Messrs. Robert Atkinson. 8.30 p.m.

Society of Engineers. Dr. Herbert Chatley and Mr. Hal Gutteridge on "Engineering Aspects of Air Raid Protection," Burlington House, W.1. 6 p.m.

Tuesday, November 8.

Air Raid Protection Institute. Mr. C. F. de Steiger on "Design and Construction of External Strongholds." 18, John-street, W.C.2. 8 p.m.

Wednesday, November 9.

The Institution of Civil Engineers. Mr. A. C. Dean on "The Relative Merits of Pre-Cast and Cast-in-Situ Piles." 6 p.m.

Institution of Heating and Ventilating Engineers (Birmingham and District Branch). Mr. G. MacKrell on "Baths Filtration Plant." At Birmingham. 6.45 p.m.

Liverpool Architectural Society. Mr. Basil Ward on "Architecture and the Public." 6 p.m.

Builders' Benevolent Institution. Annual Dinner. Connaught Rooms, W.C.2. 7 p.m.

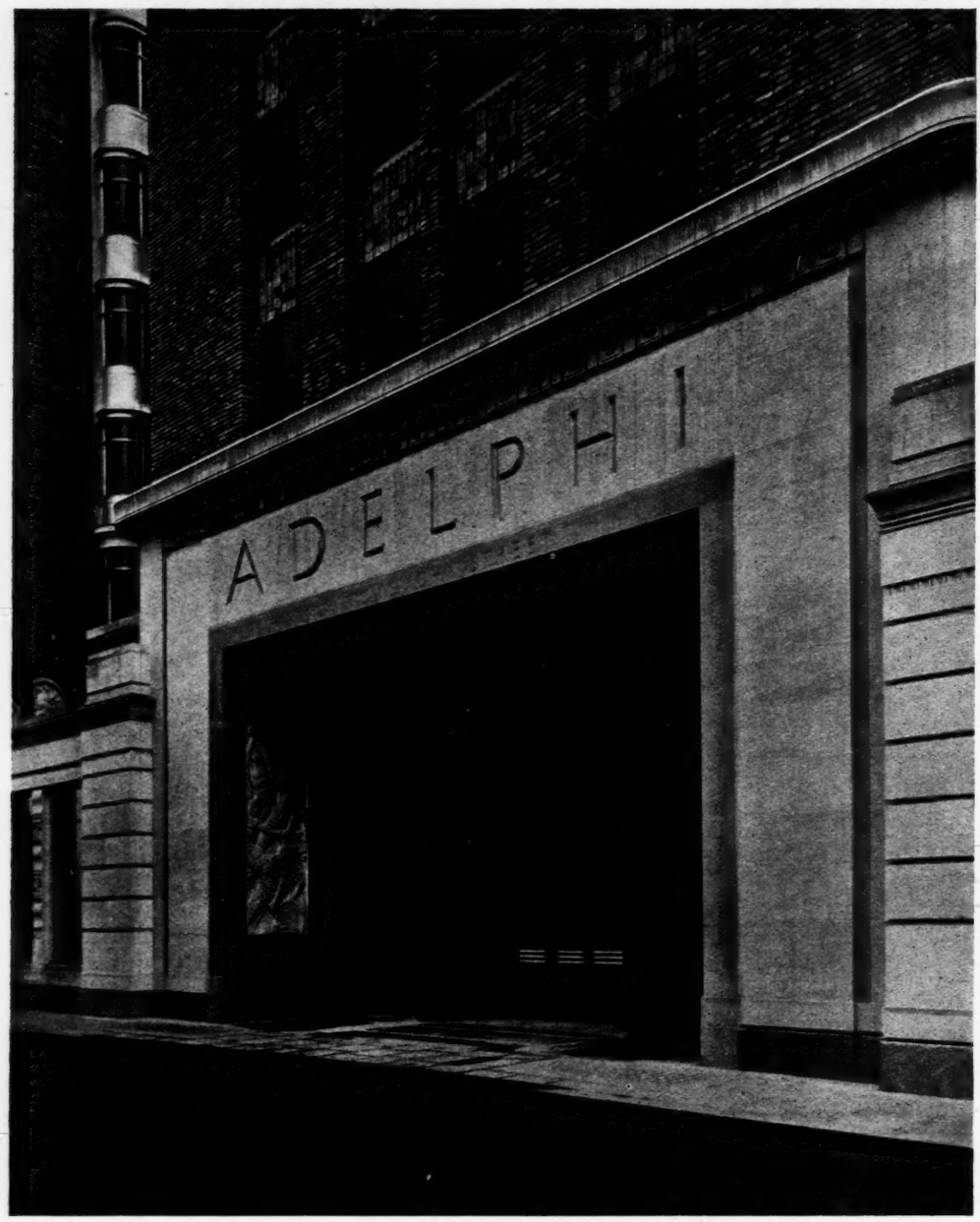
South Wales Institute of Architects (Central (Cardiff) Branch) and the Institute of Builders. Mr. R. A. H. Livett on "Housing in an Industrial City."

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher on "Greek Architecture (3000-146 B.C.): The Hellenic Period. Influences, centres of Building Activity. Architectural Character. 6 p.m.

Thursday, November 10.

Leeds School of Architecture. Informal Reunion Dinner for Past Students. Ye Olde Cheshire Cheese, Fleet-street, E.C.4. 7.30 p.m.

Institution of Structural Engineers. Mr. H. E. Lance Martin on "Scale Model Tests with Particular Reference to Arc Welded Plate Girders." 6.30 p.m.



"ADELPHI."

Opened on Monday by the Mayor of Westminster (Mr. H. S. E. Vanderpant), this 12-storey block of offices occupies the island site in the Adelphi bounded by John-street, Robert-street, the Terrace and Adam-street. The ground-floor facade and the whole of the river frontage are in stone, the remainder being in buff-coloured brick. The view above is of the main entrance, from John-street. The architects are Messrs. Collcutt and Hamp, F.R.I.B.A.

THE PRESIDENT'S APPEAL

I allow this statement to be entitled an "Appeal" because I appeal most urgently that it be read. Otherwise I do not feel that one architect need take it upon himself to "appeal" to others for the ending of a state of things that none fully realising it could tolerate. The Architects' Benevolent Society, founded in 1850, is facing rapidly rising demands with an almost stationary subscription-list, and the always inadequate funds at its disposal have reached a point at which its activities will be seriously restricted.

That such a benevolent society should lack the support of the members of the profession it concerns must be due to a want not of generosity but of knowledge. More than twelve thousand of the thirteen thousand architects in practice here do not subscribe at all, and probably most of that number have no idea of the Society's need.

In times of obvious emergency, during the war years from 1914 to 1918 and during the economic crisis from 1931 to 1933, architects responded magnificently to special appeals for the Society's work when money was not easy to come by. Emergency is not less through not being obvious, through being hidden in individual lives rather than displayed in a national misfortune. Anyone who reads through the particulars given by applicants in the year 1938 will find there hardship as cruel as any caused by the last war or by the collapse of commercial confidence seven years ago.

I am convinced that everyone who has read this will need no persuasion that much more must be done, and I therefore leave this statement of facts to make its own appeal, especially to those 12,000 architects who do not at present subscribe.

H. S. Goodhart-Rudd

We gladly give special prominence to the above Appeal by the President of the R.I.B.A. on behalf of the Architects' Benevolent Society. We are sure that the need has only to be known to be met. The splendid work of the Society for so many years past in relieving distress among architects and their dependants is too well known to need further recommendation to those who are able to contribute something towards the continuance and expansion of that merciful work.

In case there should be any misapprehension, we would stress the fact that it is not necessary for an architect to be a member of the R.I.B.A. in order to be eligible for assistance, should he unfortunately need it. The Society makes no distinction among bona-fide architects, and therefore deserves the support of all.

We include in this issue a subscription form which we suggest our readers should fill in and post off without delay to the Secretary of the Architects' Benevolent Society.

NOTES AND NEWS

Westminster House Site : A Final Opportunity.

At the last meeting of Middlesex County Council it was stated that an offer had been received to lease the Westminster House site for building development, at an annual rental which would provide full recoupment to the Council for the expenditure it had incurred. The Council resolved to defer consideration of the offer for a month in order to ascertain the observations of the Government and local authorities interested.

The Westminster House site, which adjoins the Canning enclosure in Parliament-square, was, as will be recalled, purchased in 1935 by the Middlesex County Council to prevent development by private building, as had been planned. The Council, acting with considerable public spirit and appreciative of the opportunity to add to the amenities of Parliament-square, offered the site to the Government at purchase price, and at the same time offered a substantial contribution towards the cost. This latter example was followed by the L.C.C., the Westminster City Council and the Ministry of Transport. Repeated efforts to secure the Government's promise to contribute the remainder, £140,000, of the sum required have failed, and it now seems that the opportunity to add to the appearance and convenience of Parliament-square will be lost for another 100 years unless the Government realises its responsibility in a matter which is not parochial, nor even national, but rather imperial.

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R.I.B.A. New Session.

The new session of the Royal Institute of British Architects will be opened by a general meeting on Monday, November 7 next, at 8.30 p.m., when the President, Mr. H. S. Goodhart-Rendel, will deliver his inaugural address, present the R.I.B.A. Bronze Medal and Diploma for a London building built between 1935 and 1937, to Messrs. Robert Atkinson (Mr. Robert Atkinson and Mr. A. F. B. Anderson, FF.R.I.B.A.), for the Stockleigh Hall (flats), Albert-road, Regent's Park, N.W.1, and unveil a bronze bust, by Miss Dora Gordine, of Mr. H. S. E. Vanderpant, Hon. A.R.I.B.A.

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Birmingham and Five Counties A.A.: Award of R.I.B.A. Medal.

The jury responsible for the award of the R.I.B.A. Architecture Medal in the area of the Birmingham and Five Counties Architectural Association for the three years ended December 31, 1937, has selected the Coroner's Court, Newton-street, designed by Messrs. Peacock and Bewlay, of Birmingham.

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The Empire Exhibition: Glasgow Corporation's Decision.

Only two buildings—the Palace of Arts and the Glasgow Corporation Pavilion—are to be retained from the Empire Exhibition, Bellahouston Park, Glasgow, which closed on October 29. The park is to be restored to its former state in accordance with the agreement reached between the Exhibition authorities and Glasgow Corporation, but the Corporation may come to an arrangement for the retention of certain of the decorative features such as the cascades, the fountains, the ornamental lake, and the flower gardens.

The Howard Memorial Medal, to be presented to Sir Raymond Unwin, P-P.R.I.B.A., the first recipient, at a dinner to be given on November 23, "in recognition of his services to town and country planning, and to the garden cities movement in particular." The designer of the medal (the obverse of which is on the left) is Mr. R. P. Gossop.

Unknown Warrior's Tomb: Protection Proposed.

The Dean and Chapter of Westminster are considering how best to afford protection from the feet of visitors to the granite surface of the tomb of the Unknown Warrior in the Abbey. It has been suggested that the simplest and most appropriate course would be to enclose the memorial with railings. A second proposal is that the tombstone should be raised above ground-level, and a wooden model of the tomb, as it would be if this scheme were carried out, has been prepared and has been examined by the Abbey authorities.

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Liverpool School of Architecture Society.

A supper was held by the Liverpool School of Architecture Society on Thursday, October 27, at the Bay Malton Hotel. Professor C. H. Reilly and 56 former students and their friends were present, and after the supper a film show was given by Mr. Lawrence Wright. This consisted of three slightly uncensored epics of life at the "Cowshed," Rome, and other places, which were followed by "Archie Teck," a brilliant but caustic cartoon of the Rake's Progress to Architectural Fame, which visitors to the last A.A. Party will remember with relish.

The next supper will be held on Friday, December 2, and will be followed by a film shown by Mr. Manthei. Any inquiries regarding membership of the Society should be addressed to Mr. P. J. Marshall (Hon. Secretary), at 7, South Hill Mansions, Hampstead, N.W.3.

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Howard Memorial Medal : Presentation to Sir Raymond Unwin.

The first award of the Howard Memorial Medal, established by the Garden Cities and Town Planning Association, has been made to Sir Raymond Unwin, P-P.R.I.B.A., P-P.T.P.I. It has been arranged to present the medal to him at a complimentary dinner to be held at Grosvenor House, Park-lane, W.1, on Wednesday, November 23. Mr. Cecil Harmsworth, Chairman of the Council of the Association, will preside, and the Minister of Health, the Rt. Hon. Walter Elliot, M.P., will be the principal speaker.

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Guildford Cathedral: An Appeal for Funds.

Details of a campaign for raising £80,000 for the building of Guildford Cathedral have been presented to the Guildford Diocesan Conference by the Provost, the Very Rev. E. G. Southam, who said they required, in round figures, £54,000 to pay the contractors by the time the first part of the Cathedral was finished. In addition they would require approximately the following items: Architect and fees of clerk of works, £4,000; road to south porch, £1,500; completion of path up the hill, £1,000; a 5 per cent. contingency on contract and administration expenses, £7,500; giving a total of £14,000. A total figure of £80,000 will be required to cover responsibilities with regard to the first part of the Cathedral.

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B.B.C. Talk by A Plasterer.

An interesting item in the Children's Hour programme on Friday, November 18, will be a talk by a plasterer, Mr. Holland, who visited the studio about a year ago and told stories of some of the children who come and make friends with the workmen when a house is being built. At the microphone on November 18, this speaker will answer some of the questions children ask when, inquisitively, they wander round a house in course of construction.

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A Compliment to Architecture.

Parodies of architecture on the stage, in serious illustrations, and—above all—in advertisements are so familiar that it is a pleasant relief to see advertisement on a considerable scale paying an appropriate homage to monumental architecture. Three times a year a monster setting is staged outside the Dublin Mansion House drawing attention to certain Irish activities. The choice of the current exhibit is an impressive representation of celebrated Dublin buildings, well grouped and showing the Customs House, Four Courts, Bank of Ireland, Nelson Pillar, etc., carried out in wooden models coloured a uniform aluminium; the group is topped somewhat incongruously by the Tower of the Castle, breaking an otherwise classical expression. Such displays should interest the inhabitants in their heritage and remind visitors of what the city has to show them.

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Tourist and Planner.

Enormously increased transport facilities, combined with holidays with pay, have given an obvious impetus to the movement now called *Tourism*. Abroad the advantages have long been recognised and exploited, and at home, activities, still more or less unofficial, are intensifying. In this connection it is interesting to note that the

practical Minister for Industry and Commerce in Eire, Mr. Sean Lemass, forecasts the creation of an Irish Tourist Board, backed by a capital of £500,000, to foster the tourist industry in that country, and to co-ordinate the various interests affected. This proposal has at once been welcomed, and the close connection between town planning and the preservation of rural and other attractive amenities is being emphasised. Prompt application of the powerful town planning powers that may be exercised under the Irish Acts should do much to preserve the face that is—so conspicuously—the fortune of the countryside.

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Housing Centre : Octavia Hill Exhibition.

THE Housing Centre, 13, Suffolk-street, S.W.1, is to organise an Octavia Hill Centenary Exhibition from November 14 to December 22. The Exhibition is divided into five sections, dealing with "Octavia Hill's Diverse Interests," "Her Housing Ideals," "Growth of Her Housing Movement," "Her Own Life" and "A Loan Exhibition," consisting of MSS., letters, speeches, personal belongings, etc. Sections I.—IV. will afterwards be available for hire; application should be made to the Secretary, Housing Centre.

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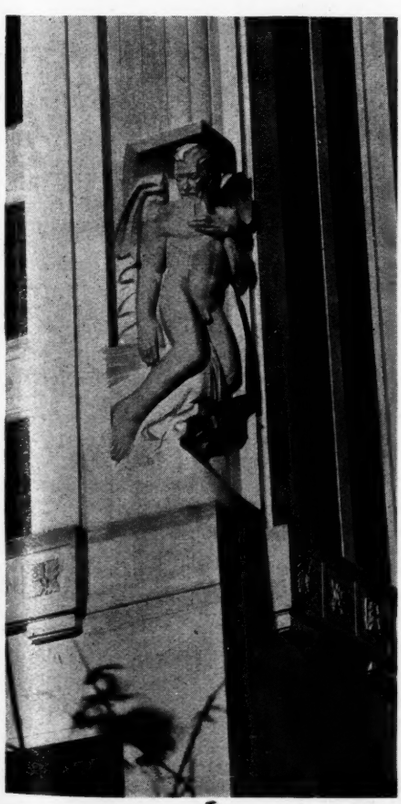
London Place-Names : University College Lectures.

FOUR public lectures on "London Place-Names and London History" will be delivered by Miss E. Jeffries Davis, M.A., F.S.A., at University College, London, on Tuesdays, November 8, 15, 22 and 29 at 5.30 p.m. The lectures which are to be held under the auspices of the Department of History of University College, will be repeated in the second term on Tuesdays, February 7, 14, 21 and 28, 1939, at 8.15 p.m. They will be illustrated with maps, and are open to the public without fee or ticket.

"INSPIRATION."

Carved figure on the river front of the Adelphi, by MR. GILBERT LEDWARD, R.A.



"CONTEMPLATION."

Carved figure on the river front of the Adelphi, by MR. ARTHUR J. J. AYRES.

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Public Health Services Exhibition and Congress.

IT is expected, we are informed, that from 1,500 to 2,000 officially appointed delegates from local authorities will attend the Public Health Services Exhibition and Congress, which is to be held from November 14 to 19, at the Royal Agricultural Hall, London. Several sessions will deal exclusively with Air Raid Precautions, and it is expected that A.R.P. officers from various local authorities will attend the Congress for the purpose of taking part in these special meetings.

The exhibition will be of a particularly comprehensive character. A large amount of space has been let to well-known firms specialising in machinery, apparatus and equipment used in various health departments of local government.

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Public Appointments.

MR. DONALD E. E. GIBSON, M.A. (Manc'r.), A.R.I.B.A., has been appointed to the newly created post of City Architect for Coventry, and will take up his duties early in the new year. Mr. Gibson at present is Deputy County Architect for the Isle of Ely.

Oldham Surveyors and Buildings Committee have decided to recommend to the council that MR. GEORGE EDWARD HARDY, Deputy Borough Engineer of Rotherham, should be appointed Borough Engineer for Oldham.

Professional Announcement.

MR. CECIL PRANGNELL, A.R.I.B.A., late Staff Architect to Messrs. Harold Samuel Properties and Associated Companies, 15, Stratton-street, Mayfair, W.1, having acquired the practice of Messrs. E. H. and A. C. Harbottle, F. and L.R.I.B.A., County Chambers, Queen-street, Exeter, as from September 5, is now in practice solely at the latter address.

COMPETITION NEWS

Waverley Market, Edinburgh.

Reconstruction of the Waverley Market at a cost of £175,000 is proposed by Edinburgh Corporation. There will be a competition for the design of the building, open to architects associated with consulting engineers resident or practising in Great Britain, and it is proposed that premiums of £500, £300, and £200 shall be offered. Mr. T. S. Tait, F.R.I.B.A., has been consulted as to the terms of the competition.

New General Police Headquarters, Hutton, Lancs.

The Lancashire Standing Joint Committee for Police and other purposes invite chartered and/or registered British and Northern Irish architects to submit designs in competition for a New General Police Headquarters and Training Depot to be erected on a site at Hutton, near Preston, Lancashire. The Committee have appointed Sir Percy Worthington, F.R.I.B.A., to act as assessor. Premiums of £500, £400 and £300 are offered. Applications for conditions and other particulars must be made to Mr. G. Etherton, Clerk of the Peace, County Hall, Preston, Lancashire, not later than December 5, 1938, and be accompanied by a deposit of £3 3s.

"DAWN."

Carved figure on the river front of the Adelphi, by MR. E. BAINBRIDGE COPNALL.

THE LONDON THEATRE

October 30.—When I was a student in my first architectural school there was a definite influx of American ideas on all matters pertaining to architecture.

The giants of architectural presentation were the army of Americans who had studied at the Ecole des Beaux Arts in Paris. There was HORNBOSTEL, CASS GILBERT, GOODHUE, and so on. HUGH FERRIS, and later ERNEST BORN, were the kingpins of the perspective world, and our architectural bible was a large book written by CURTIS, which described Parti, Poché, Entourage, etc. The architecture, in short, of the French grand manner.

The high lights of the library were those large folios which reproduced the Prix de Rome drawings of these Americans, and "Pencil Points" was the periodical of the day.

I mention this because underlying all this French-cum-American gospel was the moral of the cultured architect. To know design, construction, history, equipment, mathematics, drawing and the like, was to know only the rudiments of our dignified and responsible profession.

The Fine Arts were an essential adjunct to the elementary laws of architecture, to which must be added a knowledge of painting, music, sculpture, opera, ballet, literature and the better films.

I remember our masters encouraging this cultural extension, and I wonder now how possible it is in an already complicated world, and just where and how one is to acquire this culture.

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Painting, which I do not want to discuss now, has become confused, even to the painter. In fact, all the Fine Arts are themselves twisted and very unsure of their general direction. It is an echo of contemporary existence, we know, but there is very little other than a puzzled state to be gained by delving too deeply into their contemporary meaning.

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The Theatre—ought we to say the Drama?—is one of those more spontaneous arts which the non-dramatist is likely to understand. It is a medium of words, and we understand that medium; it is a verbal expression of thoughts, and we understand that form of expression.

Why, then, is this aspect of our cultural life so infernally drab, particularly in view of the fact that it pretends towards the entertaining of our leisure? We attend a theatre hoping to be entertained, but perfectly willing to listen to profundity if it carries conviction. While it is true that "Amphitryon 38" might run for three months and "French Without Tears" for three years, the fact remains that the intelligence that might be expected of, say, architects, could enjoy the intelligent play, despite the fact that plays less good can be maintained by another and less intelligent public.

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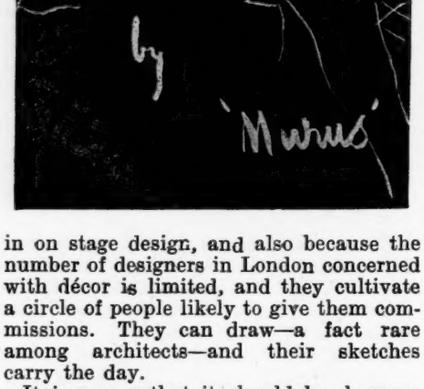
Yet a good play is a rare thing. That is why I presume to write about the London Theatre in a newspaper devoted to architecture and the building industry; that, plus the fact that the scope for architectural design in the theatre is vast, and completely untouched by architects. WELLS COATES designed a set for the Old Vic, it is true, but I know of no other instance, and, although I understand why, I feel it is a sad thought.

The reason why is because the average architect has no particular desire to crash



in on stage design, and also because the number of designers in London concerned with décor is limited, and they cultivate a circle of people likely to give them commissions. They can draw—a fact rare among architects—and their sketches carry the day.

It is wrong that it should be, because an architect has a truer grasp of three-dimensional design and is possessed of an organisation more capable of supervising building and costs. The average stage designer was originally a painter, and the average method of set building was, and is, the antithesis of efficiency.

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Most of the plays at present running in London do not possess the wit or the presentation to make them really worth while. If they have the wit, they frequently do not possess the profundity. If they have the profundity, they frequently do not possess the wit.

And the old lady's adage about what you might expect for fourpence is hardly applicable, because the seats are expensive, and to take a companion to a theatre is the average person's idea of an evening's celebration.

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You might start your cultural life in architecture with two plays written by the same authors, ELEANOR and HERBERT FARJEON. "Nine Sharp" is a brilliant satire on contemporary life written with wit that has deep meaning, and produced with a lovely sense of the theatre. It will make you laugh, and it will teach you more than you read in your newspapers. I promise you an evening well spent; and with their second play, "An Elephant in Arcady," an evening that, although it has the appearance of a light musical, is possessed of a rare quality which you might call taste, you might call art, you might call sensitivity—that you may even call good acting. The music of the play is 18th century, and by such composers as Mozart and Scarlatti; the dialogue has an intelligent bite and is crystal clear; the décor is of a kind you may have seen from such designers as OLIVER MESSEL, but of a degree that is not often seen in London.

The name of the designer is HUGH STEVENSON, and it is not a well-known name, so far as I know, in the London Theatre. Both costumes and settings will, or should, interest designers. The music will help and the play will crystallise a very fine whole.

N.B.—Very few architects could have achieved this décor.

I cannot so thoroughly recommend the "Hamlet" which is being played in its entirety at the Old Vic. The theatre itself may give you the clue to the evening, but, theatre apart, here is a mediæval play, dressed in Renaissance settings and acted in modern dress. Hamlet leaves for England in a black Homburg amid an escort of tin-helmeted soldiers, and I, for one, forget the play and think of the incongruity.

I am told that the Renaissance settings bridge the gap between the old and the new, but I see only three distinct and unrelated parts, and after seeing "Troilus and Cressida" done in a similar manner, and "Hamlet" done with curtains in non-dated dress, I am inclined to close the door on these experiments, which appear amateurish. I am afraid the design of the sets is not very good. The columns (which are realistic, and therefore ask for architectural criticism) would make a modernist laugh, a traditionalist cry.

No! I am afraid this is not the way to a cultural architecture.

N.B.—SIR EDWIN LUTYENS was obviously the man for this job.

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The "Mercury" is a small theatre which attempts serious plays. The auditorium is in a small, or at least what appears to be a small, Gothic chapel which has been converted, and the entrance lobby and administrative offices are simply a house which adjoins the chapel. The theatre has hammer-beam trusses in the roof, and I imagine that sixty is the capacity of the auditorium (sixty or a hundred).

I saw two plays in this theatre. One was SHAW'S very little done "Man of Destiny," and the other was a Soviet comedy by MICHAEV called "Squaring the Circle." It is difficult recommending a theatre of this kind, as it is not everybody's idea of an evening out. But it has the virtue of being interesting, cheap and intelligent. To some it may have the added virtue of being quaint, but I suggest you see it as one of the rather surprising things to be found in London.

The very opposite of this kind of thing is the West End comedy; and I imagine that "Banana Ridge" is about the most extreme antithesis that one could find to "Man of Destiny" and "Squaring the Circle." ROBERTSON HARE and ALFRED DRAYTON are the principal actors, and the settings by LAURENCE IRVING are not among his most successful works. His usual ventures into period art suffered a setback when he was given the job of designing a bungalow for a rubber planter in the Far East.

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"Glorious Morning" may intrigue you as a straight play. It is more interesting as a compelling piece of drama than as a presentation which would please the æsthetic sense. In fact, the designing is poor, the drama extremely good, and worthy of a more dramatic setting.

There are other plays in London that I have yet to see, and which I am told are worth seeing. They are "The Corn is Green," "Idiot's Delight," "The Flashing Stream," and "Dear Octopus."

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So much for the theatre, particularly the London theatre. I am rather afraid that if this tiresome tradition of the theatre does not break away from itself and evolve some new tempo in presentation, it will lose a great deal of appeal,

particularly popular appeal, which I suppose is the life-blood of any art which requires an auditorium to be filled each night. To sit for two and a half hours in a seat which has cost you 12s. 6d. with someone beside you who has cost you another 12s. 6d.; to be told to arise every three-quarters of an hour and wander into a mausoleum-like bar for a drink; to be called by a bell and told to sit quiet for another three-quarters of an hour, is not in itself an appalling experience, but requires something worth while to make it possible as a form of evening entertainment. The films have undoubtedly met the desire of the pleasure-seeking public for the fairly obvious reasons of continuous performance, reasonable prices, and so forth; even so, there are very few films worth attending, very few, indeed.

During the past two or three years the French products have undoubtedly been the best; and then there was the discovery of a very talented young actress, by name DANIELLE DARRIEUX, who has put her mark on cinema performances, which makes it difficult (particularly combined with good direction) to see the American product with any degree of tolerance, let alone pleasure. There are three films of hers running in London at the moment which were made in France. I have a curious idea that the French film has recently become more popular and less sincere than it was three or four years ago. Films like "Un Carnet de Bal," "Kermesse Héroique," "Orage," and so on, are infinitely better than one or two I have seen produced recently. There is an early film of Danielle Darrieux's called "Mayerling," which has an integrity not existing in the two other films in which she plays, one "Mademoiselle Ma Mère," and the other "Abus de Confiance." The products of the Berkeley Cinema, the Academy, and Studio One, are usually worth while, and the work of these French film designers is infinitely better than that of their Hollywood counterparts. The architect of "Abus de Confiance" is a man called GUY DE GASTYNE, and the architect for "Mademoiselle Ma Mère" is JACQUES KRAUSS.

Mavus

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

The A.A.S.T.A. and Official Architects.

TO THE EDITOR OF *The Builder*.

SIR,—After the lengthy pause in professional affairs, due, first, to the holiday period, and then to the international crisis, we think that your readers may be interested to hear of the progress made in connection with the Association's campaign for a "Charter for Architectural Assistants employed in Public Offices."

This publication was sent in July last, with appropriate letters, to all Clerks to Councils and to all Principals of Architectural Departments of local government authorities with populations of over 50,000. A gratifying number of requests were received from the Clerks to Councils asking for further copies for circulation to councillors prior to discussion in committee. Many inquiries were also received from individual architects in official employment and a number of individual letters expressing agreement with and appreciation of its contents.

There is no doubt, from the letters received, that the Charter has been of great value in crystallising the dissatisfaction in public offices, and in putting forward for the first time a comprehensive and constructive set of ideas for improving conditions of service in these offices. Its long term, educational value is undoubted, but we should like to see much more local initiative on the part of architectural staffs to secure the piecemeal or gradual adoption for these offices of the suggestions put forward in the Charter.

Fundamentally, the responsibility for the development of these ideas must rest with the staffs themselves. We believe that the role of the architect in replanning and rebuilding our environment is one of vital importance, and that it should be a source of inspiration as well as of bread and butter. If architects and architectural assistants believe in their function in the community, and if they are sincere in their grouses, they must organise to improve their position.

To follow up the campaign for the "Charter," efforts are being made to organise staff meetings in certain large London offices. The A.A.S.T.A. is willing to assist in organising such meetings, and to send speakers to meetings in London or the provinces.

We urge all assistants in public offices to spread discussion on the "Charter," to try to interest their own principals or local councillors in points which apply directly to their own departments, and to write letters expressing their opinions to the technical and local Press, to the A.A.S.T.A., and to the Salaried Members Committee of the R.I.B.A. It must be realised that individual grousing leads nowhere, and may even give reactionary principals the chance to retard improvements by penalising their critics and intimidating others. Success can only be won by pooling ideas, and finding the best means of approach for any particular authority.

A. W. BARR,
for Public Relations Committee,
A.A.S.T.A.
113, High Holborn, W.C.2.

The London Builders' Conference.

TO THE EDITOR OF *The Builder*.

SIR,—I have followed with interest the correspondence in connection with the above and I am greatly inclined to agree with Mr. Crampton's views. I am unable to agree with Sir Alfred Hurst's remarks about the encouragement given by larger firms to the small builders.

What are the chances of a small builder making any appreciable progress in the London Builders' Conference movement? Let us, for example, say that an architect has been instructed by his client to invite tenders for a contract, and his client gives him a free hand in selecting contractors to tender. He naturally confines his invitations to a few large firms well known to him, and seldom, if ever, is a thought given to inviting a small builder. I am not blaming the "Conference" for this, and so long as the architects are free to choose their builders the lot of a small builder who attempts to break into big work will continue to be a hard one. How often has it happened in cases where a small builder has been invited to tender, and has tendered successfully, that the architect advises his client not to accept it but to give it to one of the larger firms? I have yet to learn of a case where the larger firm has agreed to stand by the small builder by refusing to take on the contract. I had an experience not so long ago which goes to prove the opposite. My firm was invited to tender for a contract well within its scope. It was just a plain, straightforward job and required no special experience. My firm's tender was the lowest and I thought there was no doubt about my firm carrying out the contract. Judge of my surprise when the client informed me that one of the large firms had approached him to be given a chance to revise their tender, and they sent in a lower price and were given the contract. I expect many small builders can give similar experiences, which do not testify to that broadminded and generous attitude which Sir Alfred Hurst would like us to believe the larger builders have toward the smaller builders.

The small builder is at a distinct disadvantage so far as the "Conference" is concerned. Generally speaking, the architects' motto is "safety first," and they invite only a few of the larger firms, in which case there should not be any question of cut-throat competition. A few weeks ago a Press report about this matter took as an example nine tenders for a contract, the lowest being £40,000. After the "Conference" terms had been applied the amount of the tender was increased by £3,382, making the contract figure £43,382. Now of the nine firms tendering there would be, say, three or four firms either too busy to tender, or who did not want the job. It would not be in their interests to return the invitation, so they get a cover price from the firm actually tendering. This might happen quite a number of times during a year, and some firms will be rewarded with a substantial amount from the pool for doing no more than sending in cover prices. I do not consider this to be right to the client.

Suppose we take the example amount, which is	£40,000
Add for Architect's fees, say ...	2,400
Client would pay, say	£42,400
Now take the "Conference" tender	£43,382
Add for Architect's fee, say ...	2,603
The Client would pay, say ...	£45,985

or £3,585 more than he would do without the "Conference." I have assumed that the quantity surveyor's fees are included in the extra, but if not the client would be called upon to pay a further 2 or 2½ per cent. on the amount added by the Conference.

It will be seen that architects and surveyors also benefit by the scheme, so is it to be expected that they will raise any objection to it?

In my opinion, the "Conference" is a sign of weakness on the part of the Builders' Federation. Most firms of any standing are members of the Federation, and if "suicidal" cut-throat competition is resorted to by its own members, then it is up to the Federation to take suitable action with those members. If all the members possessed the right qualifications they should know the proper prices at which work could be carried out and cut-throat competition avoided.

Let the Builders' Federation take to task those members who resort to price-cutting by "black-listing" them. Then, in my opinion, there would not be any need for "Conference" terms at the client's expense.

H. GRIFFITHS.

(Correspondence continued on page 885).

APPROACH TO PLANNING

By FRANK BENNETT, A.R.I.B.A.

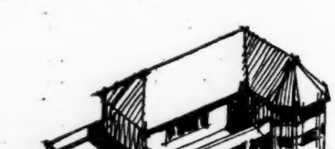
IX.—THE SPORTS PAVILION.

As a preliminary to this subject, consider, not directly the plan, but the people in their association with a sports pavilion.

First there are football players, who assemble at a sports pavilion in the winter time. They arrive chilly, change their clothes, and instead of starting play immediately, often have to wait about, perhaps on the premises. They may like a little comfort, and will not be happy if the rooms are cold and draughty. After a game, when they feel hearty and vigorous, they do not bother so much about comfort as convenience. They all burst into the dressing-rooms together, undress, grab their towels from lockers and dash to be the first at the shower baths. They demand not only hot water and plenty of it, but quick adjustments for turning on the cold water, too. After the showers and dressing again, they leave the dressing-rooms and crowd into the tea-room, where they sit down to consume a tea which they expect to be served to them rapidly and without a hitch.

Cricket players, on the other hand, behave differently: they bask in the sun and take things more easily. They are, perhaps, more ready to enjoy the graciousness of a building and to appreciate finesse in the appointments and finish of it. When the sun is too hot they enjoy sitting under the shade of verandahs. They have no need to rush for the shower bath, and they sit down to tea quietly.

Tennis players differ from footballers and cricketers in this, that they disport themselves at shorter intervals. Because they are usually interested in the social as much as the sporting side of tennis, given the choice they will prefer a pavilion more on the lines of a country club than on lines suitable for a football club. Tennis, of course, is a winter as well as a summer game, and provision in a pavilion must be made accordingly.



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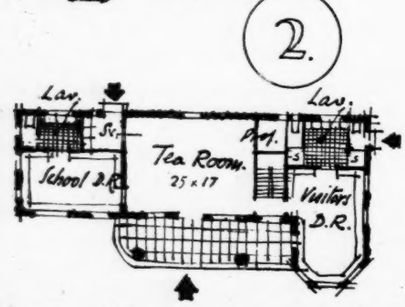
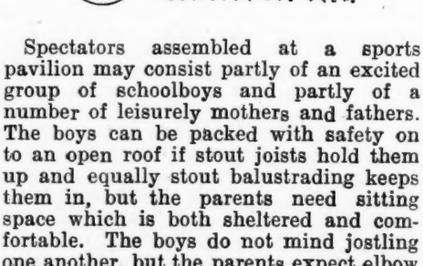


CRICKET PAVILION, ST. JOHN'S SCHOOL, LEATHERHEAD. ARCHITECT: ERNEST B. GLANFIELD.

Visiting players feel shy at first: they like to have a dressing-room to themselves, but they join the home team at tea-time quite happily.

1 CRICKET PAVILION, MILL HILL SCHOOL.



3 OLD BRIGHTONIANS R.F.C. PAVILION. ARCHITECTS: ALLISTON AND DREW.

Spectators assembled at a sports pavilion may consist partly of an excited group of schoolboys and partly of a number of leisurely mothers and fathers. The boys can be packed with safety on to an open roof if stout joists hold them up and equally stout balustrading keeps them in, but the parents need sitting space which is both sheltered and comfortable. The boys do not mind jostling one another, but the parents expect elbow room and a detachment from the general activity.

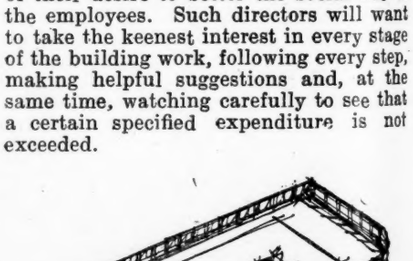
The women responsible for providing tea in the pavilion cannot keep people waiting but must be ready to serve nearly everybody at once: they need reliable equipment in the kitchen, and will not be best pleased if its fails them. The provision of a long counter for serving tea on the cafeteria principle may save the women's labour but not suit the style of a particular club.

An odd shed placed somewhere near the playing-fields for tools and machinery will normally satisfy the requirements of a groundsman, but a room in the pavilion is likely to satisfy more and help the groundsman to take greater interest in nursing his pitches. The cricket scorer also appreciates special accommodation; he dislikes being talked to, and prefers to be set apart in a little box on his own—placed, preferably, high up on the building.

It will be appreciated that a sports pavilion, in common with other buildings of a public or assembly nature, normally consists of one large room around which cluster a number of smaller administrative rooms. The administrative rooms generally comprise three sections: one section the dressing- or changing-rooms, fitted with seats, lockers and pegs; second section the lavatories fitted with basins, w.c.s and showers; and third section, a kitchen connecting to larder, store and outside entry. Other accommodation may include rooms for three people, the secretary, the professional and the beforementioned groundsman; then space for a bar with counter; also a gear store, and perhaps a chair store; a drying-room; towel rooms; a billiards-room and, for the larger pavilions, a heating chamber with fuel store. Accommodation for spectators, in addition to that on the roof, is usually provided by means of a loggia in front of the tea room. It is well if the stairs to a roof be arranged so that people moving up and down disturb those on the loggia as little as possible.

At one time athletes had to be content with less elaborate accommodation in sports pavilions; no kind of bath or shower was considered essential as it is to-day (see the illustration No. 1 of the Old Mill Hill School cricket pavilion). But nowadays sanitation in some sports pavilions falls little short of a luxury demand; not only are there special dressing-rooms and baths for women as well as for men, but in addition there are rooms for tennis players and bowls players, too. Spectators have their own special lavatories; lavatories for people out in the field are provided and, at the Glasgow University pavilion (No. 7) it will be seen that the men players, in addition to using showers, can dive into a plunge bath.

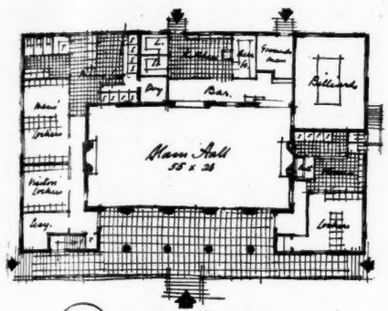
As well as being responsible for the design and construction of a sports pavilion, the architect will have to use customary tact towards his clients. He may find himself coping with a group of directors, chiefs of a business firm, who feel proud of their desire to better the social life of the employees. Such directors will want to take the keenest interest in every stage of the building work, following every step, making helpful suggestions and, at the same time, watching carefully to see that a certain specified expenditure is not exceeded.



4 SHEPHERDS BUSH CRICKET CLUB PAVILION.

4a SHEPHERDS BUSH CRICKET CLUB PAVILION. JOHN GREY AND C. H. ALLISTON ASS. ARCHTS

5. SPORTS PAVILION AT RAVENSBOURNE FOR THE "TIMES". HERBERT O. ELLIS & CLARKE, ARCHTS.



5a. SPORTS PAVILION AT RAVENSBOURNE FOR THE "TIMES". HERBERT O. ELLIS AND CLARKE, ARCHITECTS.

Then there will probably be another personality, the secretary, who carefully explains both the issues thrashed out and the final decisions made by the sports committee. In addition to the directors and the secretary, there are also the members of the sports club, possibly hard-working, conscientious people who, having contributed regular sums to the building fund, quite naturally feel a desire to know what is happening. They will watch every stage of the construction with an appraising eye and be ready enough with generous appreciation. They will be ready with criticism, too.

When the designer of a building deals direct with only one "owner" he may feel himself free to do much as he likes, but when he deals with a whole sports club he may find himself in a position very much like that of the architect who, trying to design a church, was expected to please not merely the congregation as a whole, but every individual member of the congregation as well.

An examination of the accompanying illustrations reveals certain similarities, as well as differences, to be found in the design of contemporary Sports Pavilions. The first four of the six examples give accommodation for one particular sport and the remaining three for a variety of sports. No. 4, calling itself a "Cricket" pavilion, provides rooms in addition to the normal for tennis and bowls players. While dressing accommodation in Nos. 1, 2 and 3 comprises two rooms, it comprises four rooms in No. 5; five rooms in No. 4, nine in No. 6, and 13 in No. 7. A tea room, although dominating in No. 1, the smallest of the buildings, is unquestionably overpowered in No. 7, the largest of the buildings. While Nos. 4, 5 and 7 provide flat roofs, and Nos. 2 and 5 provide balconies for spectators, No. 3, the pavilion built exclusively for Rugby football players, provides no seating above-ground at all.

The plan of No. 1 lacks a bathing compartment, but its simplicity is pleasing. Politeness impels the home team in this pavilion to allocate the larger of two dressing-rooms to visiting teams rather than to themselves. Entry to dressing-rooms is made easy by means of doors leading from both verandah and tea-room. Stairs, approached from outside, lead to a flat roof. In the centre of this roof stands a scorer's box as excellently placed for isolation as it is for the composition.

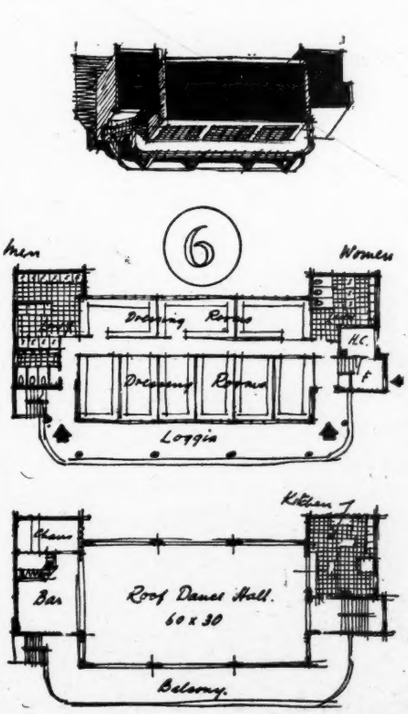
Mr. E. B. Glanfield has given No. 2, the cricket pavilion at St. John's School, the pleasing appearance of being a little asymmetrical house. In the planning it will be seen that again the home teams do rather better by the visitors in the way of a dressing-room than they do for themselves.

Timber, the material used for the construction of the building in No. 3, can look exceedingly well against a background of trees, and be eminently suitable for the construction of a small sports pavilion. No. 3 looks attractive partly because of its weather-boarding and partly because it makes no effort to look like a country house. After games, the players at this pavilion enter sanitary compartments not *via* dressing-rooms, but direct at the back corners of the building where they are provided with long baths meant especially for foot washing. A door to a ladies' lavatory, it will be noticed, opens more abruptly from the club room than one might expect in such a building.

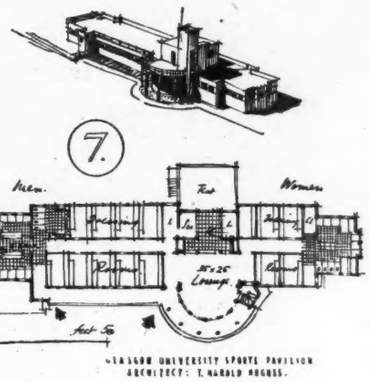
The main hall of No. 4a, the Shepherd's Bush Pavilion, is larger by half than that in the building No. 3. The provision of a bar to the side of the hall serves to show that tea will sometimes, but not always, satisfy a sportsman's thirst. A number of thoughtful ideas in the design of No. 4a justify close examination of a good plan.

Nos. 5 and 5a, the building for *The Times*, is given an appearance as much like a regular club as that of a sports pavilion. There is no separate bar provided in the accommodation, and members, it appears, are not served, but have to fetch their own refreshment from counters which open on to the main hall.

The feature of No. 6 is the absence of a main tea room from the ground floor, but a fine dance hall takes its place on



SPORTS PAVILION AT OSTERLEY. DESIGNED BY E.A. GRAPS.



GLASGOW UNIVERSITY SPORTS PAVILION. ARCHITECT: T. HAROLD HUGHES.

an upper floor. Owing to this arrangement the building differs in principle from all the others. The windows to the dance hall open down to the ground and by so doing give extra space to the balcony.

No. 7, in addition to showing what planning for sport on a grand scale can involve, is specially interesting as an asymmetrical composition.

Asymmetry as an occasional relief from too much symmetry is fascinating in itself; but, of course, it needs careful handling. In this building a tower, thrown up by the side of a tea-room strikes a satisfying three-dimensional balance between the long arm of the men's wing on one side and the short arm of the women's wing on the other. While the forms are new, at the same time one recognises a familiar touch of the cathedral in the plan and of the battleship in the elevations.

The Sports Pavilion as a type not only takes an important position in building to-day, but is likely to take a more important position in the future. Athletics as recreation have been booming now for some years and the campaign for "Health and Fitness" intensifies the boom. War may bring a check to such building but, let us hope, only a temporary one.

(To be continued.)

OBITUARY

Thomas Houston, F.R.I.B.A.

We regret to record the death, on Friday, October 21, at the age of 65, of Mr. Thomas Houston, F.R.I.B.A., at his home in Harbeston-avenue, Belfast.

A member of the Ulster Society of Architects, Mr. Houston served in its earlier days for two years as honorary treasurer and later for two years as honorary secretary. He was president of the Society from 1934 to 1936. He began his early training with the firm of Messrs. Young and Mackenzie, and in 1902 established a practice on his own account. Two years later he won an open competition for Ravenhill Presbyterian Church, and since then had been responsible for the planning and supervision of a number of hospital and church extension schemes. Mr. Houston had also undertaken the planning of many schools, and, apart from his work in conjunction with the Co. Down Regional Committee, he had a reputation for specialised domestic architecture, there being many examples of his work in this class in Northern Ireland. Mr. Houston was elected a Fellow of the Royal Institute in 1934.

An Architect's Estate.

Mr Arthur Benjamin Cook, of Croydon, estates architect, who died on June 29, aged 55, left estate of the gross value of £27,887, with net personalty £7,964.

THE NEW "ADELPHI"

MESSRS. COLLCUTT AND HAMP, F.R.I.B.A., ARCHITECTS.

It seems only yesterday that demolition operations began on the great central block of the Adam Brothers' Adelphi. Yet to-day, as if by magic, the new Adelphi, a great block of offices in steel, brick and stone, is in being. It was opened last Monday by the Mayor of Westminster, Mr. H. S. E. Vanderpant.

From the accompanying illustrations it will be seen that Mr. Stanley Hamp (Messrs. Collcutt and Hamp) has made a most successful job of a difficult problem. The plans show how he has embodied a large amount of excellent accommodation, including a basement garage (an indispensable adjunct to a great modern building) and many floors of well-planned and well-lighted offices. One excellent feature of the layout is the retention of the famous high-level terrace, which is open to the public, and from which the remarkable view over London is still obtained.

The new Adelphi is an important addition to the London waterfront not only because of its magnitude but because of the successful way in which it groups with its great neighbours. Viewed from the south side of the river, it makes an excellent balancing composition with the Savoy Hotel (an earlier work of the same firm of architects), with the dominating mass of the Shell-Mex building and its tower between. "Good manners in architecture" is a precept not always realised in practice. If the example of the new Adelphi were followed there would be less cause for complaint about the inevitable redevelopment of London.

Relating to the site were many Acts and Regulations which had to be complied with. The Adelphi Act, 1933, passed by Parliament, regulated the development of the site and governed heights, widths and levels of the various streets and staircases, etc. The approval of the Crown Lands Advisory Committee had to be obtained for the south front; rights of light had to be considered; and the whole structure had to conform with the requirements of the London Building Act and the stringent regulations of the London Fire Brigade. An amending Act was passed by Parliament in 1938 to allow of the erection of a service structure on the roof above the level laid down in the original Act.

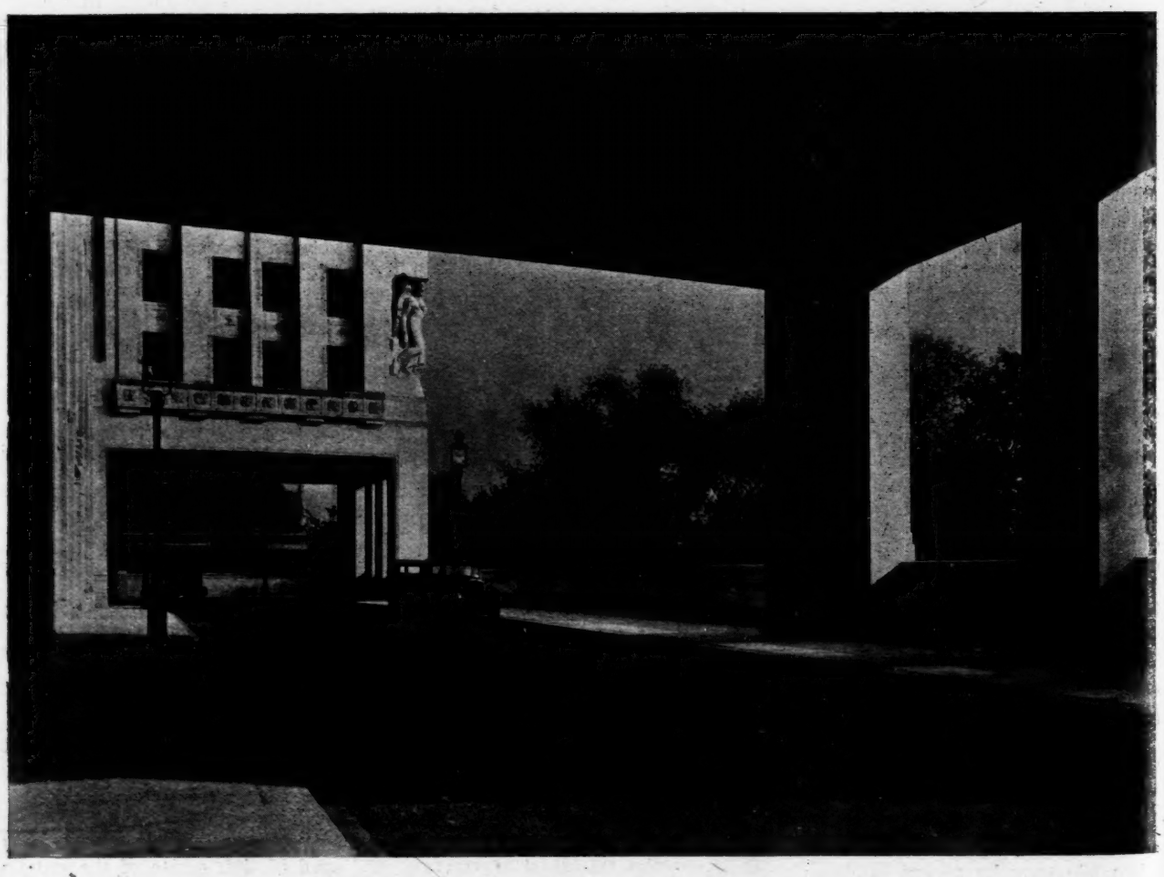
The work of demolition commenced early in 1936, and later in the year building operations were started. Owing to the subsidence of the roads a few months after the building operations had commenced, the erection of the building was delayed for some considerable time by the reconstruction of the roads and the vaults on three sides of the site. This reconstruction enabled an extra floor to be designed between the higher and lower Robert- and Adam-streets.

There are eight floors above the John-street level and two below, to the level of the lower roadway, from which ramps lead to a garage which will hold 500 cars, approximately 35 ft. below the level of John-street. New lower roads have been constructed in lieu of the old cobbled carriageways beneath Robert- and Adam-streets, from which trade goods enter the building. Two artesian wells were sunk to a great depth (605 ft.) to provide the water supply to the building, and two emergency supplies from the Metropolitan Water Board are connected from the upper and lower streets.

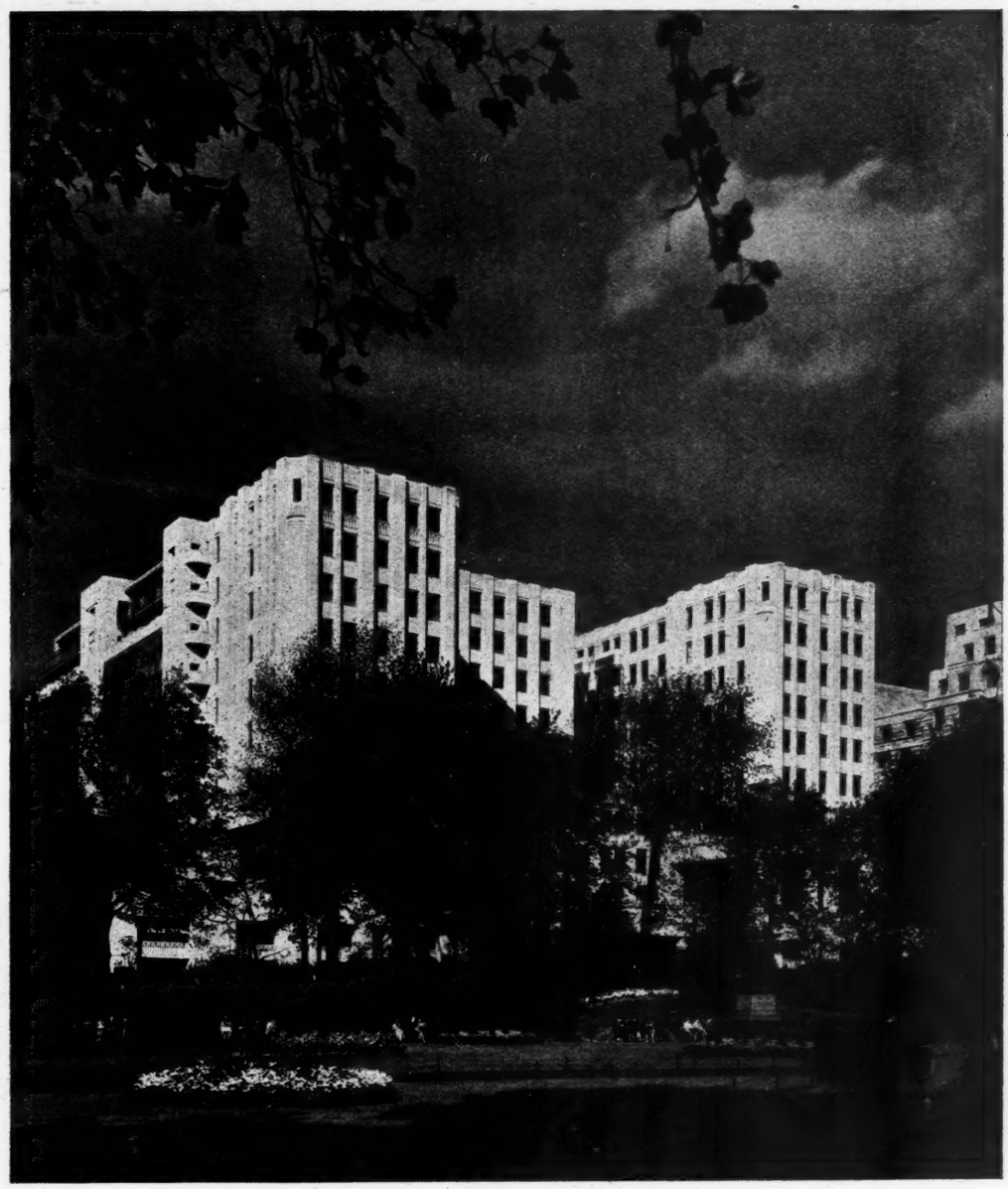
Pile foundations to a depth of 30 ft. were necessary, and large steel bloom bases are used to carry the stanchions which support the structure. The general construction is steel-framed with reinforced concrete and pot floors. The external walls are of buff brickwork to John-, Robert- and Adam-streets, and the south front, main entrances and ground storey are of Portland stone. Metal sliding and casement windows are fitted to all fronts, and cellulosed cast-iron doorways and bronze doors to the entrances off the four streets. The old Adelphi-terrace has been reconstructed, and the view across the Thames will be there for all time.

Internally, the main entrance halls and the main corridors are of marble with stopped and polished Travertine walls and plain Travertine floors. The interior finish throughout the building generally is a warm cream Travertine, with

(*Continued on page* 876.)



VIEW OF TERRACE, LOOKING EAST.

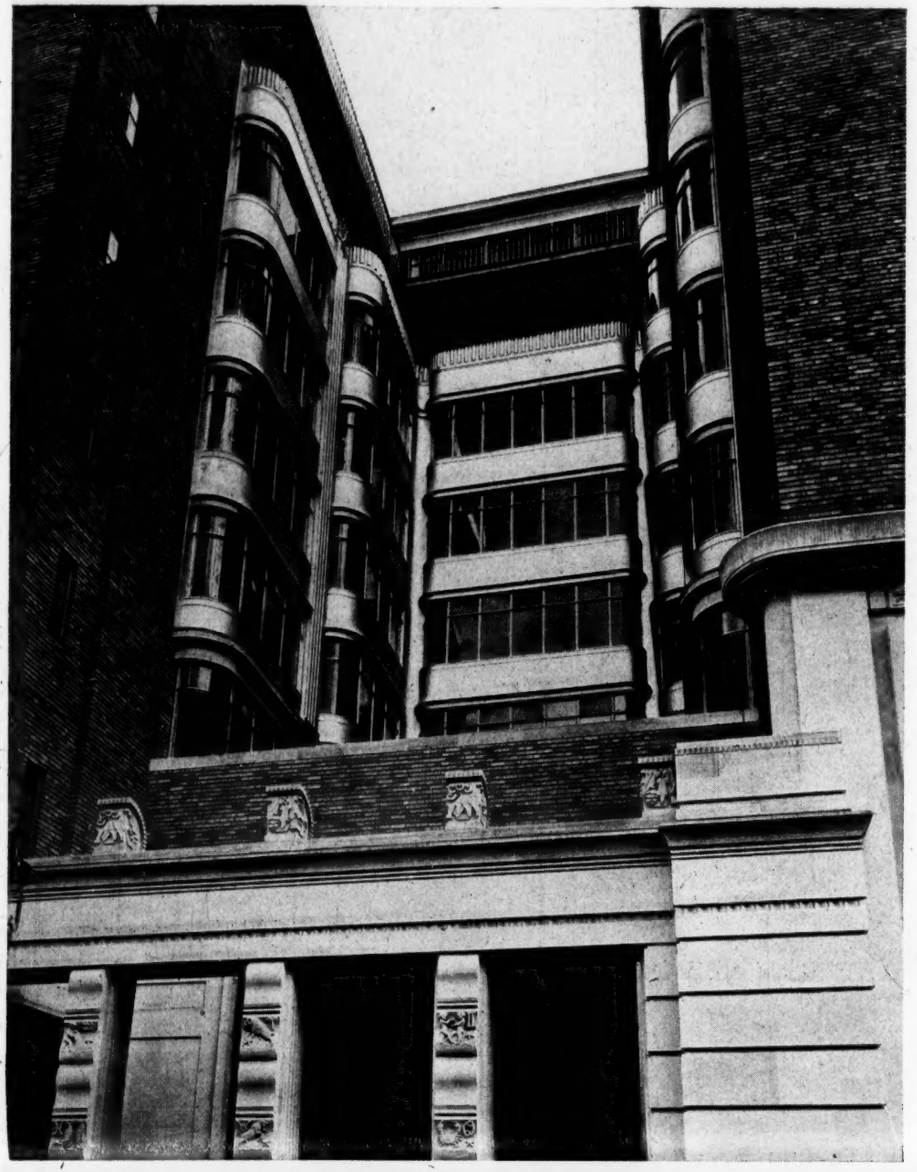


VIEW FROM EMBANKMENT GARDENS.

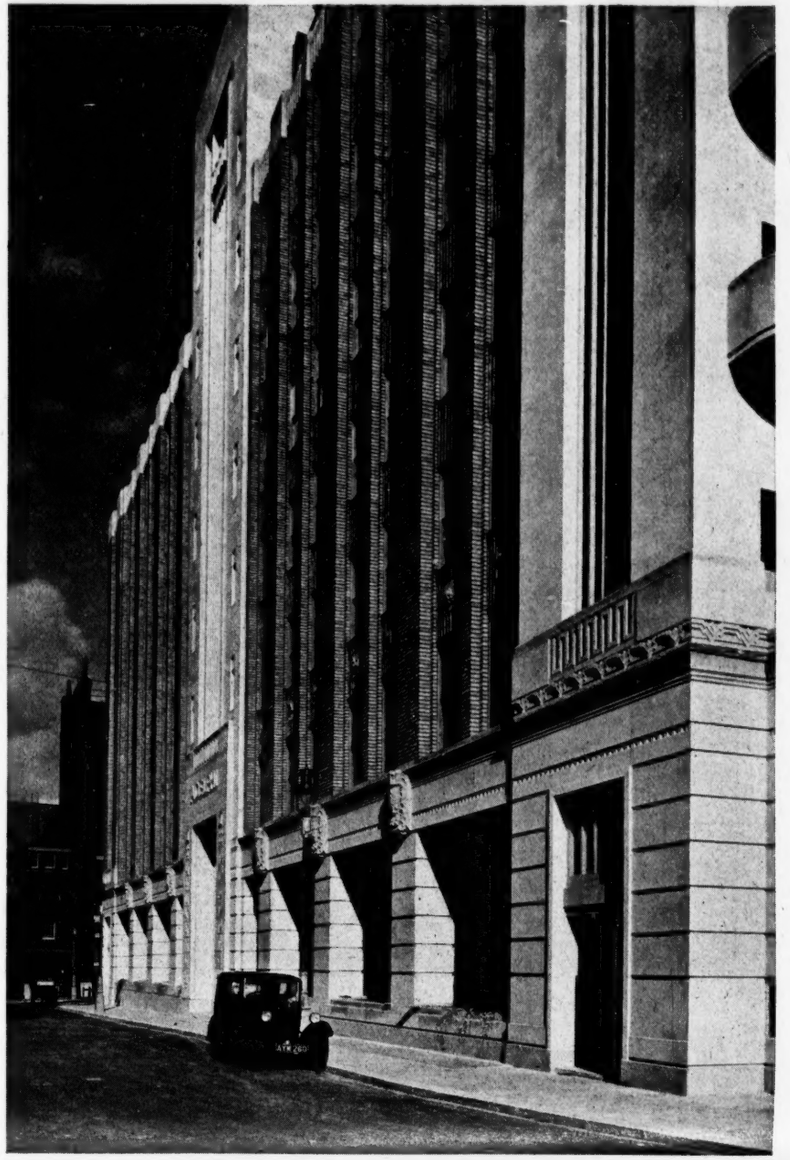
"ADELPHI": OFFICES WITH GARAGE, LONDON, W.C.

MESSRS. COLLCUTT AND HAMP, F.R.I.B.A., ARCHITECTS.

"ADELPHI": A BLOCK OF OFFICES WITH GARAGE, LONDON, W.C.



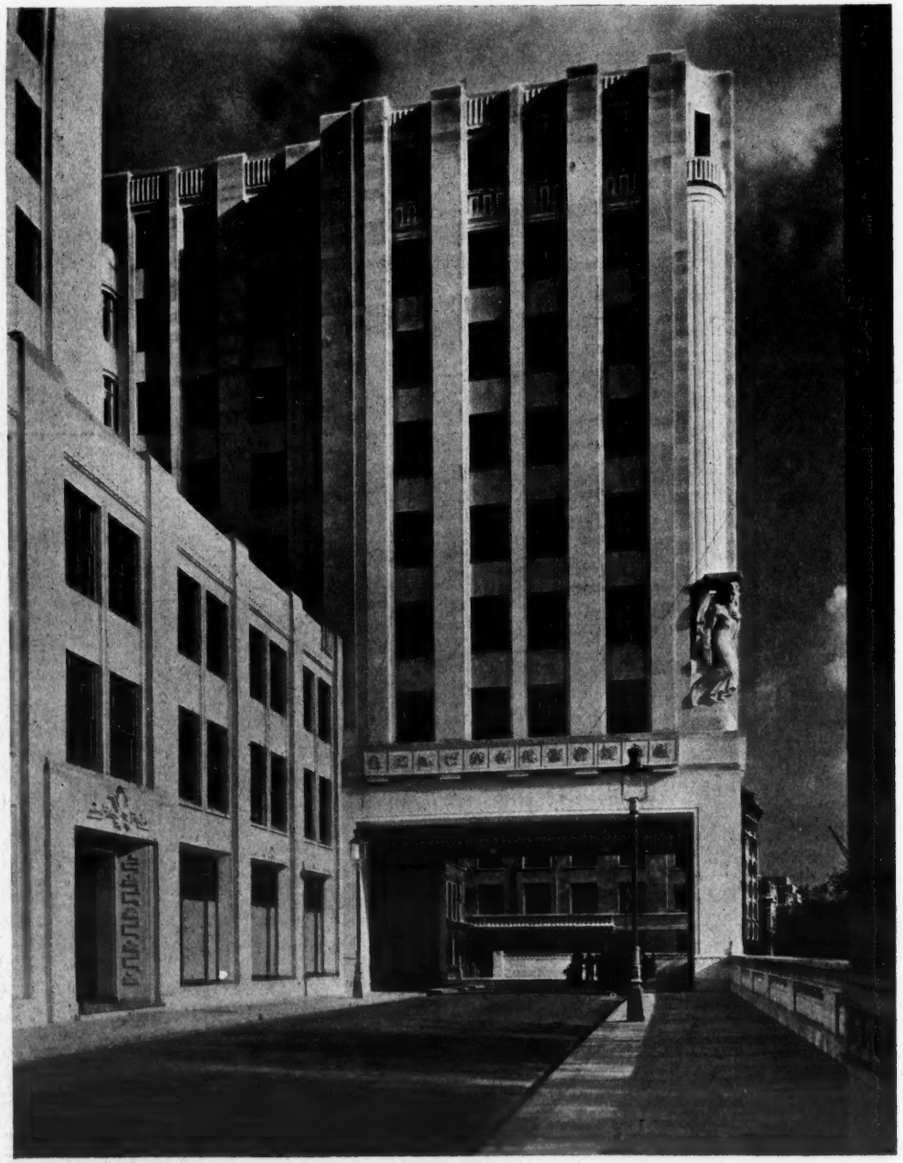
DETAIL OF OPEN AREA, JOHN STREET.



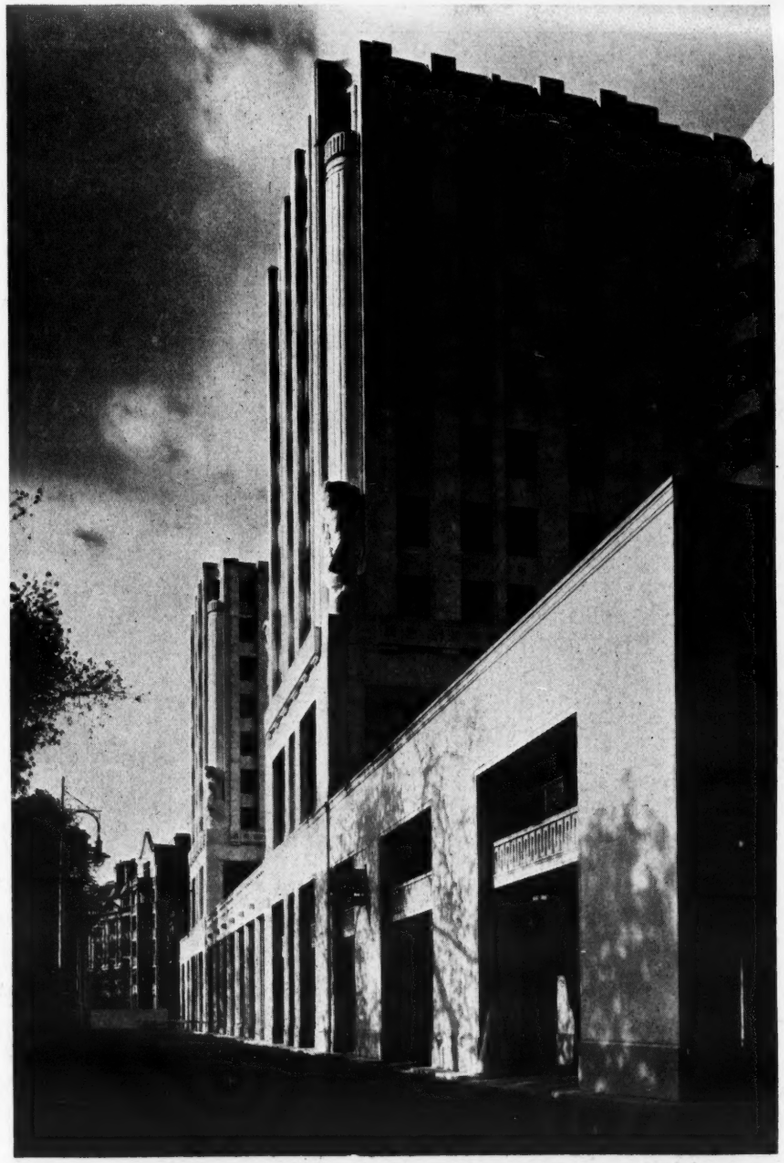
GENERAL VIEW OF ROBERT STREET FRONTAGE.

DETAIL OF OPEN AREA, JOHN STREET.

GENERAL VIEW OF ROBERT STREET FRONTAGE.



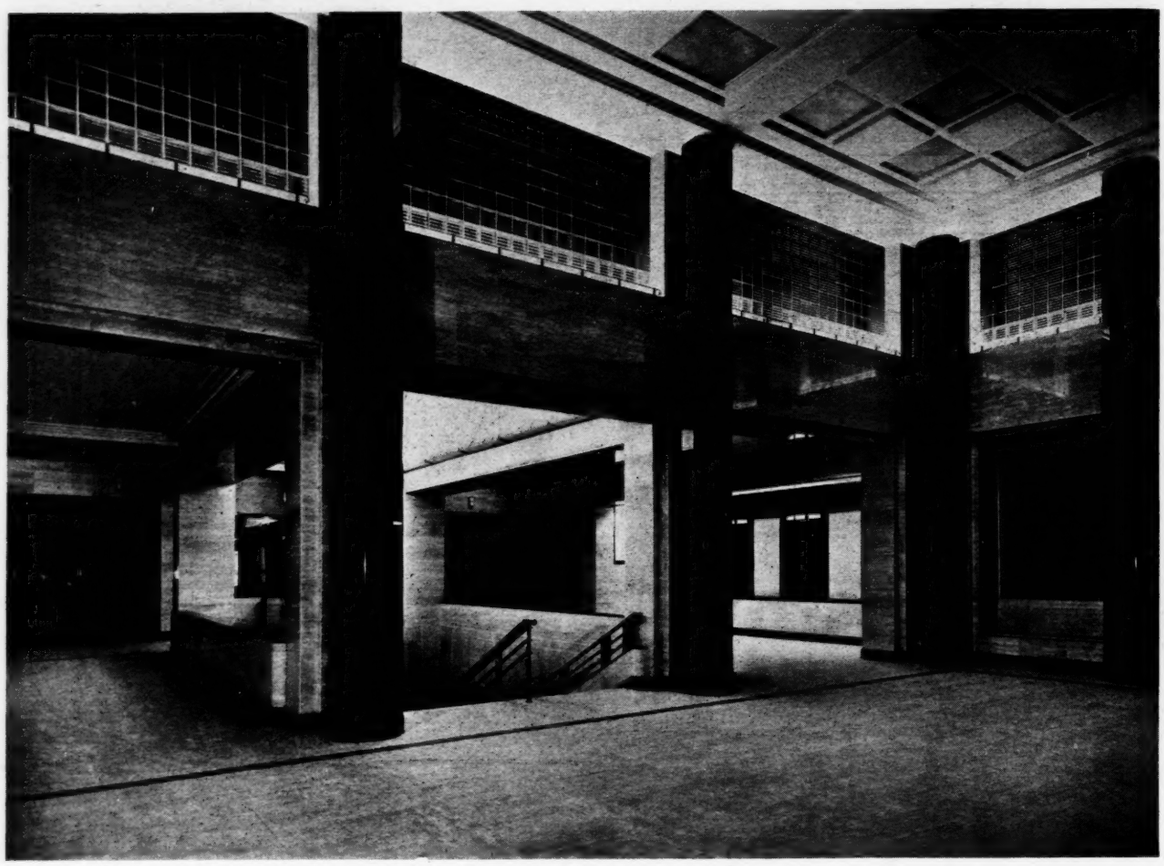
VIEW OF TERRACE, LOOKING EAST.



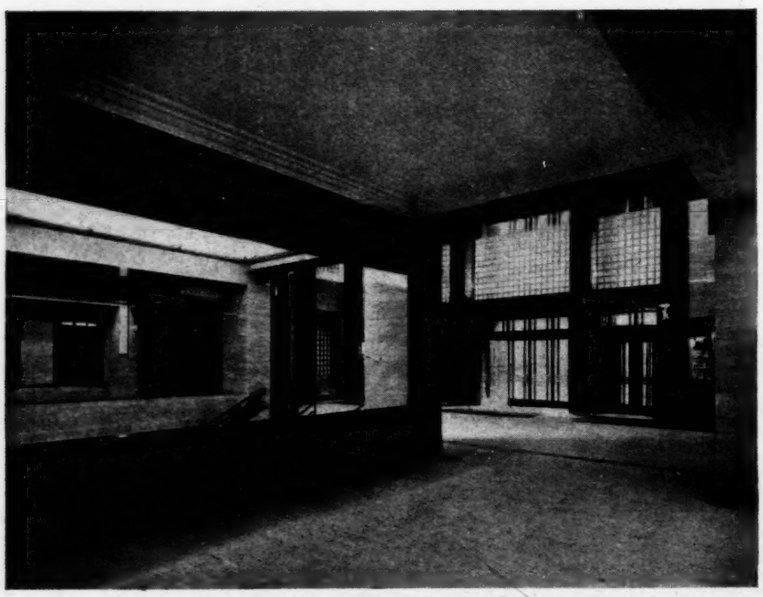
VIEW FROM NEW EMBANKMENT ROADWAY, LOOKING WEST.

MESSRS. COLLCUTT AND HAMP, F.R.I.B.A., ARCHITECTS.

"ADELPHI": OFFICES WITH GARAGE, LONDON, W.C.



ENTRANCE HALL FROM JOHN STREET, LOOKING TOWARDS LIFTS



Left:
ENTRANCE HALL FROM JOHN STREET, LOOKING TOWARDS DOORWAY, WITH STAIRCASE TO EMBANKMENT LEVEL ON LEFT.

MESSRS. COLLCUTT AND HAMP, F.R.I.B.A., ARCHITECTS.

MAIN EAST-WEST CORRIDOR AT JOHN STREET LEVEL.

Right: VIEW OF STAIRCASE FROM EMBANKMENT LEVEL, LEADING TO THE JOHN STREET MAIN ENTRANCE HALL.

(*Continued from page* 870.)

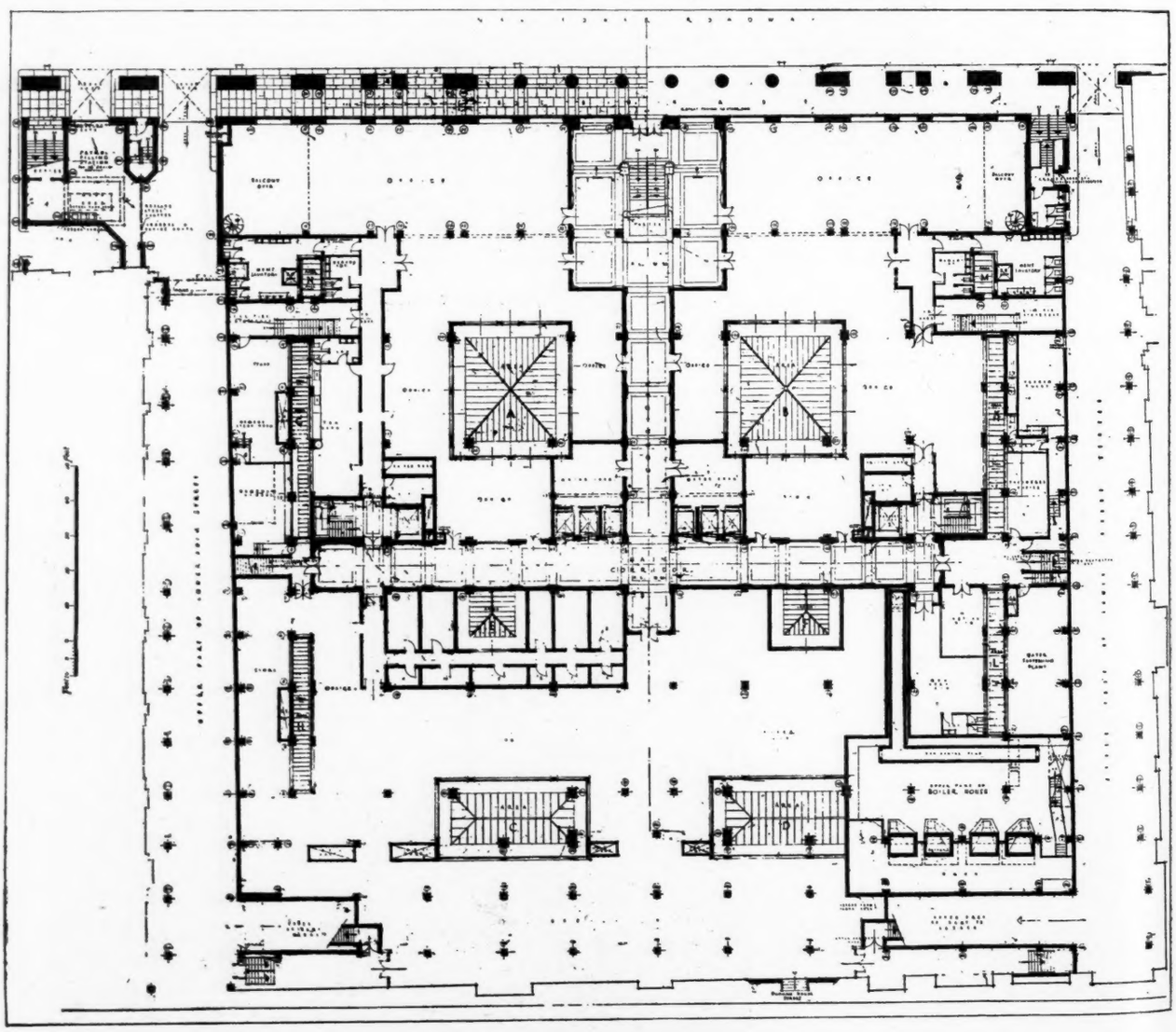
black ebonised architraves and veneered cross-banded doors stained green. On each floor there are four sets of lavatories fitted with metal partitions, tiled floors and walls. Eight lifts are installed in the building, six being passenger lifts operating at a speed of 450 ft. per minute, and two freight lifts, placed on each side of the building.

The general carving of the building has been executed by Mr. Joseph Armitage, and the panels to the main entrance doors, John-street, by Mr. Newbury Trent, the entrance doorway and the figure depicting "Dawn" on the south-east corner being by Mr. Bainbridge Copnall. The figure on the internal angle to the south-east tower, "Contemplation," has been executed by Mr. A. J. J. Ayres, the figure on the south-west corner of the south-west tower by Mr. Donald Gilbert, depicting "Night," and the figure at the south-east corner of the south-west tower depicting "Inspiration" by Mr. Gilbert Ledward, R.A., under whose direction all the figures were carried out. Some of these sculptures are shown on page 865. The lettering is by Mr. George Mansell.

The consulting engineer was Mr. J. F. Farquharson, and the electrical engineers were Messrs. J. Stinton Jones and Partners.

The general contractors were Messrs. Gee, Walker and Slater, Ltd., of Fitzmaurice-place, W.1, who also executed the heating and ventilating and carried out the roads. Sub-contractors engaged were:—

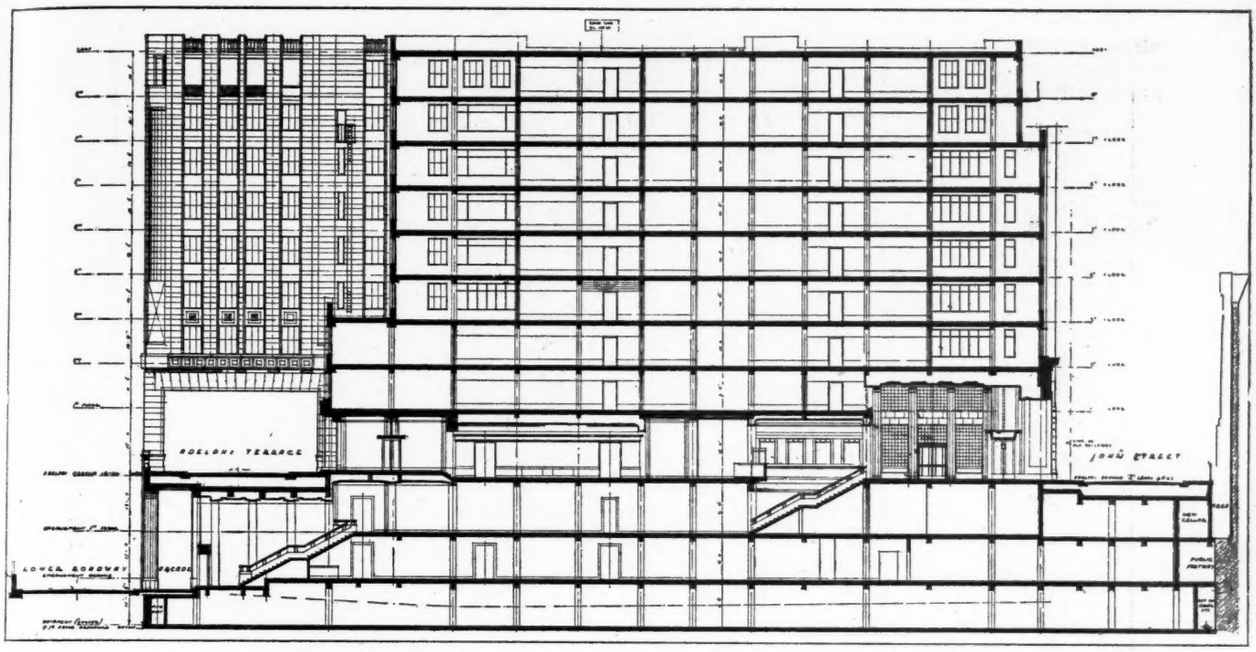
Waygood-Otis, Ltd., passenger and freight lifts; George Mansell, lettering; Crittall Manufacturing Co., Ltd., metal casements and sash windows; Whitwick Colliery Co., Ltd., bricks; Redpath, Brown and Co., Ltd., steelwork; Birmingham Guild, Ltd., main entrance doorways, surrounds, lift enclosures and showcases; Benham and Sons, Ltd., tea-service equipment; Richard Brown, Ltd., granite; Brown and Madeley, fibrous plaster ceilings; Cater and Co., Ltd., floor and wall tiling; Comyn Ching, locks and door furniture; Fenning and Co., Ltd., W. W. Jenkins and Co., Ltd., and John Stubbs, Ltd., marble work; Flooring Contracts, Ltd., reinforced concrete floors; Gayton, painted lettering; James Gibbons, Ltd., nameplates; G.P.O., telephones; G. A. Harvey and Co., Ltd., metal shelving; Haywards, Ltd., balustrades, handrailing, etc., staircases; J. A. King and Co., Ltd., glass and concrete windows; Lenscrete, Ltd., glass and concrete windows and glass bricks; Le Grand, Sutcliffe and Gell, pumps, deep wells; H. H. Martyn and Co., Ltd., metal doors and staircase handrails, lavatory partitions; Mather and Platt, Ltd., steel rolling shutters and doors, drencher and sprinkler installation, and fire appliances; Frederick Sage and Co., Ltd., kiosks, telephone booths; Shanks and Co., Ltd., sanitary fittings; Starkie, Gardner and Co., Ltd., handrailing to stairs; Shaw's Glazed Brick Co., Ltd., faience to areas; Adrian Stokes, Ltd., balustrades, handrailing, etc.; Sturtevant Engineering Co., Ltd., vacuum installation and letter-chute installation; South Western Stone Co., Ltd., stonework; Sunley and Co., Ltd., garden work; Synchro Time Co., Ltd., time-recording machine; Becco Engineering Co., Ltd., water softening; Limmer and Trinidad Lake Asphalte Co., Ltd., asphalt; Palmer's Travelling Cradles, window-cleaning apparatus; Le Grand, Sutcliffe and Gell, artesian wells; J. F. Ebner, wood-block flooring; Troughton and Young, Ltd., electrical sub-contractors; Hatcham Rubber Co., Ltd., rubber flooring; Thornley and Knight, Ltd., paint; Horton Manufacturing Co., soap containers; A. Goldstein and Co., glazing; and William Warne and Co., rubber mats.



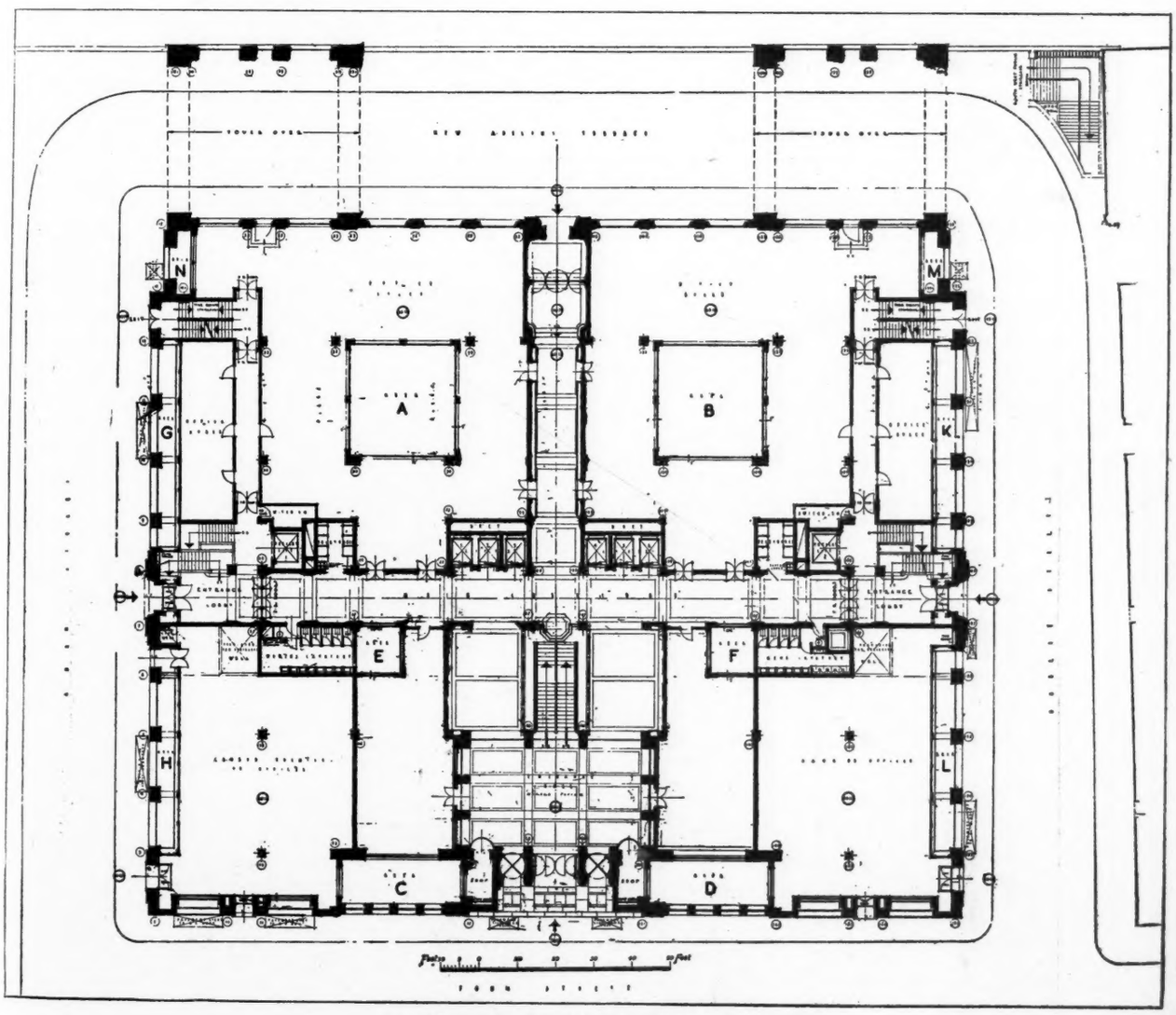
PLAN AT NEW EMBANKMENT ROAD LEVEL.

"ADELPHI": OFFICES WITH GARAGE, LONDON, W.C.

MESSRS. COLLCUTT AND HAMP, F.R.I.B.A., ARCHITECTS.



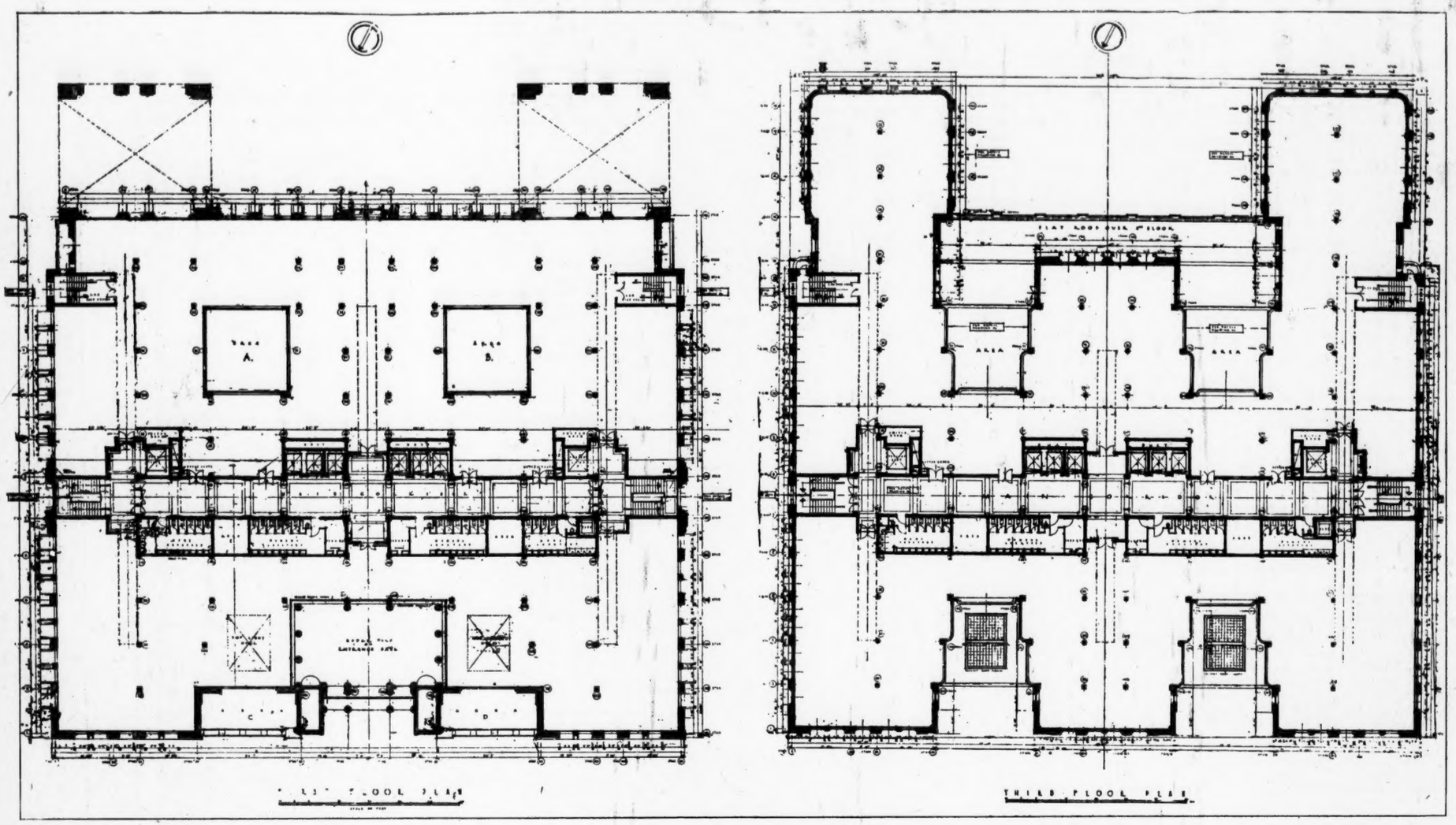
SECTION THROUGH BUILDING ON CENTRE LINE OF JOHN STREET ENTRANCE HALL.



PLAN AT JOHN STREET AND TERRACE LEVEL.

"ADELPHI": OFFICES WITH GARAGE, LONDON, W.C.

MESSRS. COLLCUTT AND HAMP, F.R.I.B.A., ARCHITECTS.



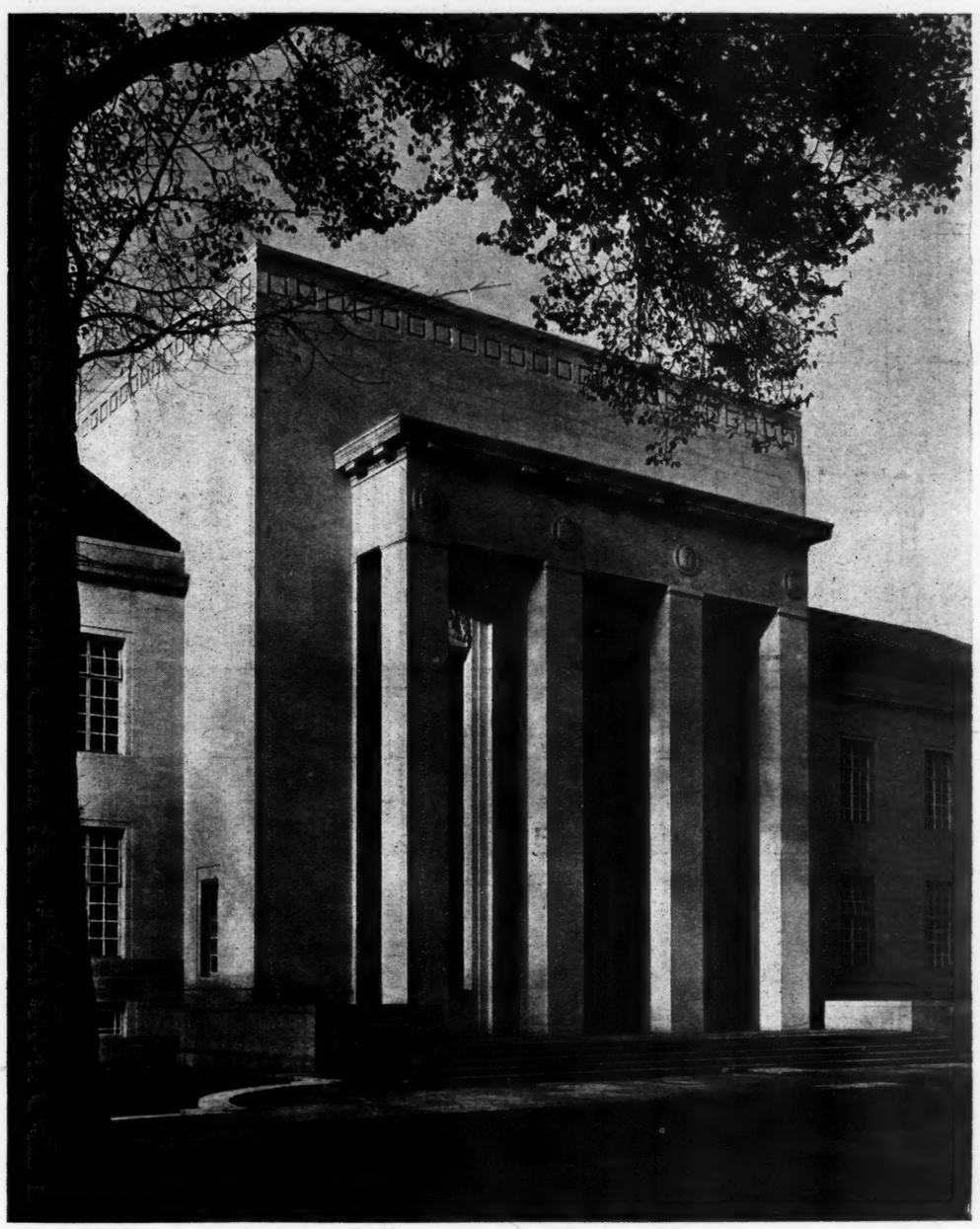
FIRST-FLOOR PLAN.

THIRD-FLOOR PLAN.

"ADELPHI": OFFICES WITH GARAGE, LONDON, W.C.

MESSRS. COLLCUTT AND HAMP, F.R.I.B.A., ARCHITECTS.

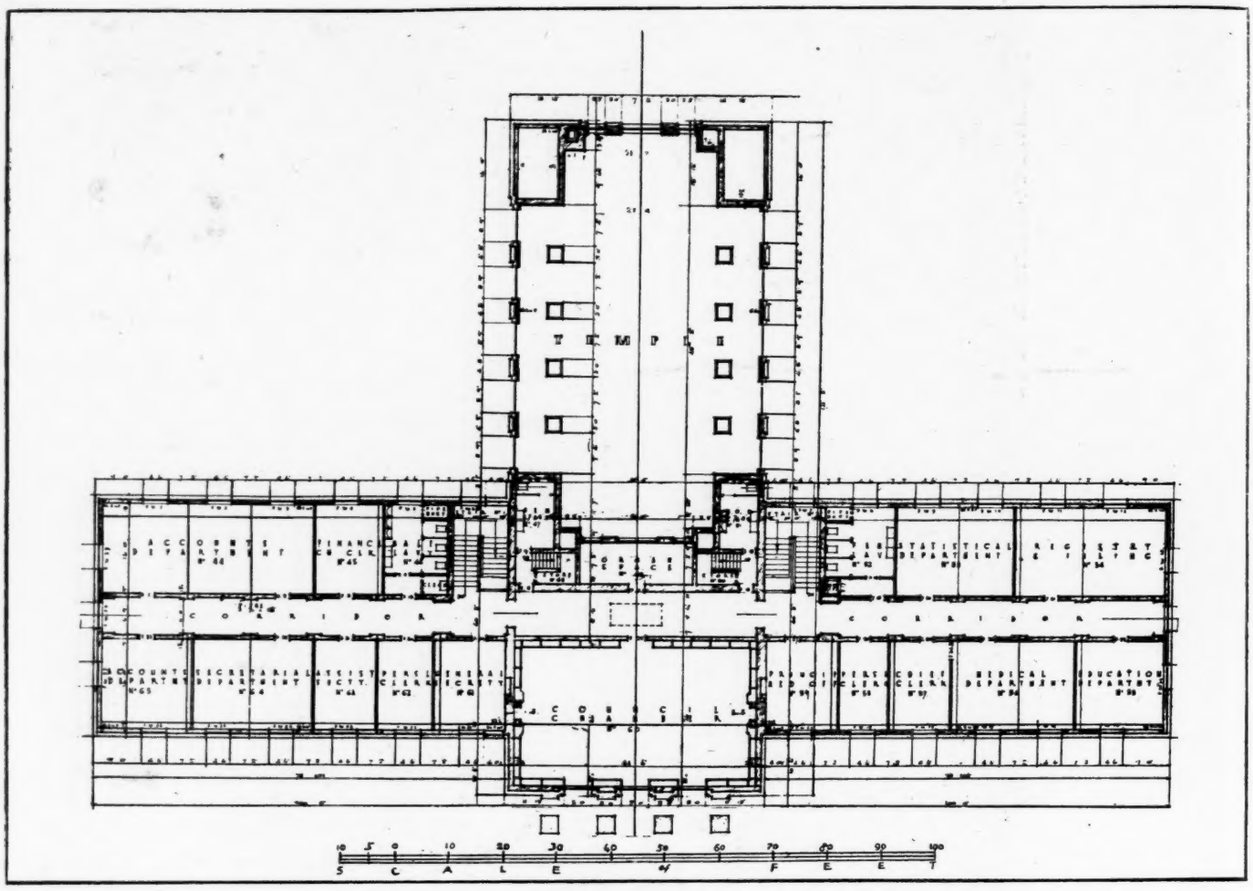
TEMPLE OF PEACE AND HEALTH, CARDIFF.



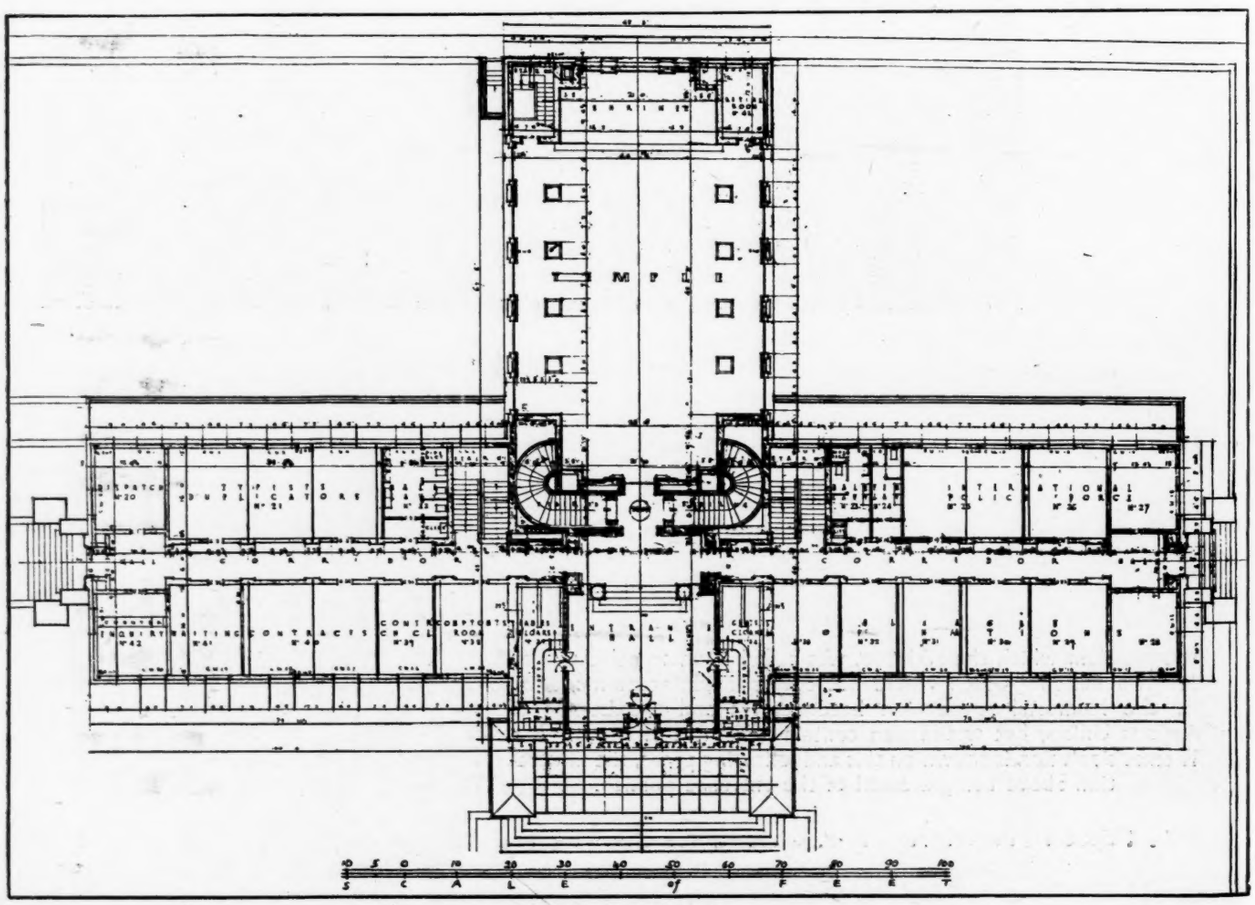
The problem which the architect was called upon to solve was to design a building which would not only provide accommodation for the Memorial Association headquarters and the League of Nations Union, but would also contain a Temple of Peace. Mr. Thomas's solution is shown on this and following pages, the illustration above being a detail of the entrance portico.

MR. PERCY THOMAS, P.P.R.I.B.A., ARCHITECT.

TEMPLE OF PEACE AND HEALTH, CARDIFF.



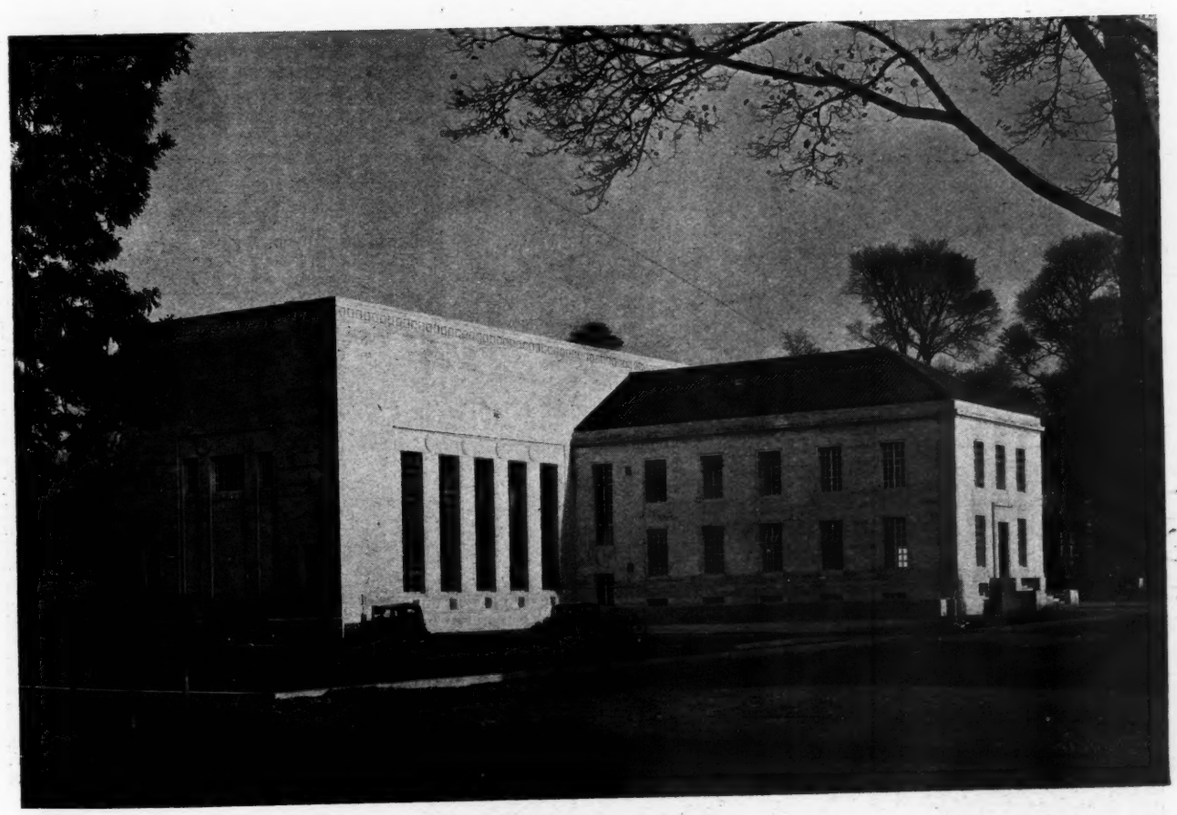
FIRST-FLOOR PLAN.



GROUND-FLOOR PLAN.

MR. PERCY THOMAS, P.-P.R.I.B.A., ARCHITECT.

FRONTAGE TO KING EDWARD AVENUE.



VIEW FROM NORTH ROAD.

TEMPLE OF PEACE AND HEALTH, CARDIFF.

In planning this building it was felt that whilst the structure should be one complete unit, the two sections of the building—the Temple (Peace) and the Memorial Offices (Health)—should be separately expressed. This has been achieved by planning the building in the form of a letter "T." The Temple, which forms the centre portion, is carried up higher than the two wings, and is expressed on the front elevation by a modern treatment of a classic portico, and the two wings containing the Welsh Memorial and League of Nations Offices are kept simple and severe as a contrast. The whole of the exterior is carried out in Portland stone, and the roofs of the two wings are covered in dark red Italian-pattern tiles.

The main entrance is in the centre of the King Edward-avenue frontage. Behind the 31-ft. high square columns are three large windows fitted with bronze grilles finished in antique green patina. Above these windows are three panels each containing a figure representing Health, Justice and Peace. On the frieze above the columns are four discs bearing the Arms of England, Ireland, Scotland and Wales. The main doorway leads into the entrance hall, the walls of which are lined with Larrys Mouchette marble, and the floor covered with Mereuil marble with a border of golden Travertine and black. A short flight of steps leads from the entrance hall level to the main ground floor. On either side of the entrance hall are cloakrooms for the use of persons attending meetings in the Temple. Beyond the entrance hall is a small vestibule from which a pair of doors in "Birmabright" steel lead into the Temple itself and, on either side, staircases lead down to the crypt, which is underneath the Temple.

This crypt, which has been designed to receive the Welsh National Book of Remembrance, is a small chamber with a vaulted roof constructed of Bath stone. The doorway to the crypt is fitted with a massive bronze grille, and at the end of the crypt is a black marble pedestal upon which will be placed the Book of Remembrance, illuminated by a concealed light in the vaulted roof. The Temple is designed in the same modern treatment of classic as the remainder of the building. The eight square columns forming the side aisles are in fluted black and gold marble. The floor is covered in Roman Travertine divided into squares with golden Travertine, and the walls are lined with a dove-grey Trani Mirabelle marble. The coffered ceiling is richly coloured in grey, emerald green, and gold. The Temple is provided with a modern Hammond organ. The Temple is heated entirely by invisible panels buried in the floor and in the marble walls.

CRYPT, SHOWING PEDESTAL AND CASE CONTAINING BOOK OF REMEMBRANCE.

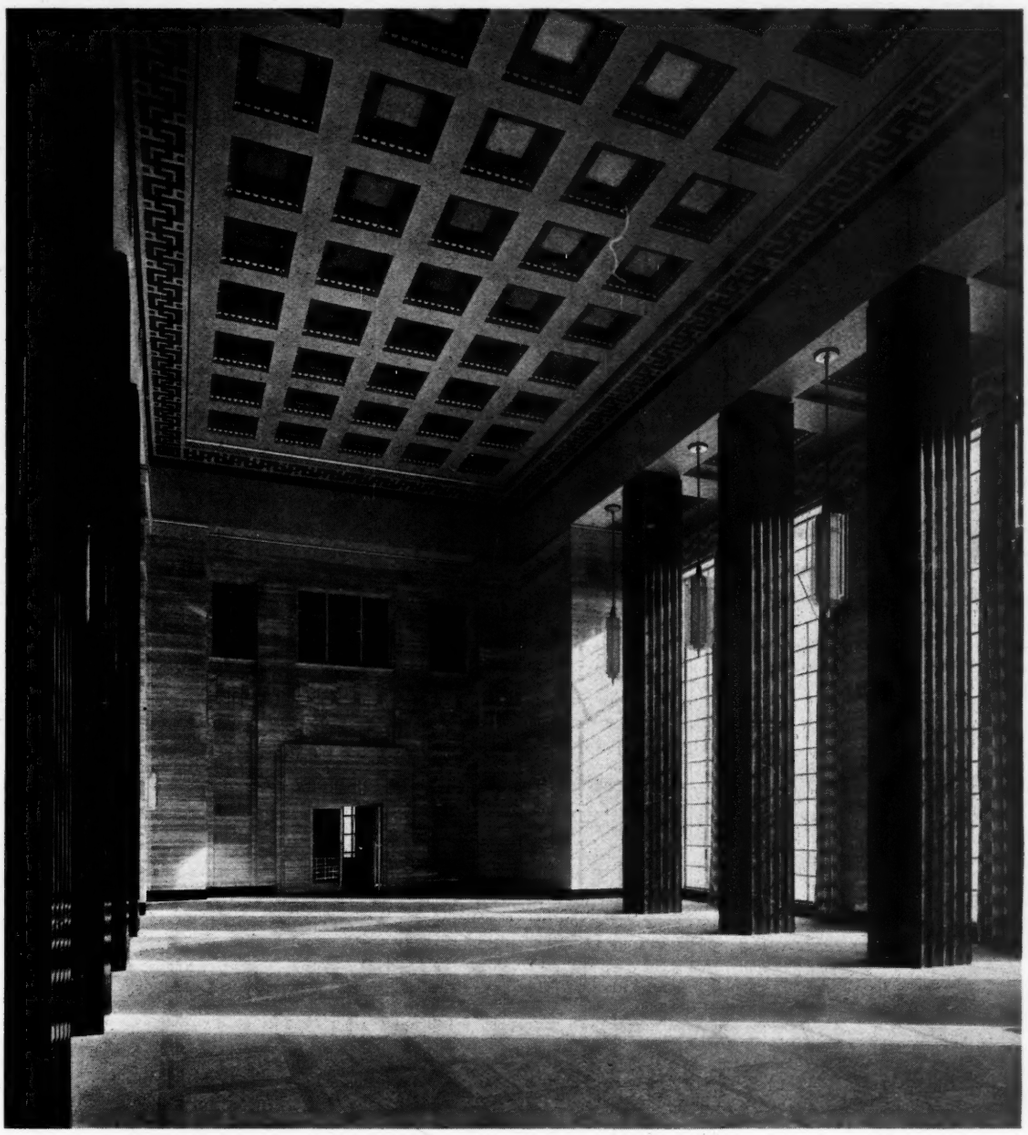
On the first floor, immediately over the entrance hall, is the Council Chamber. The walls are fitted with built-in bookcases in Australian walnut inlaid with Macassar ebony. The remainder of the building is occupied by the Welsh National Memorial Association with a certain number of rooms on the ground floor allocated to the offices of the Welsh League of Nations.

The cost of the building, excluding furniture and equipment, is about £62,000. The general contractors were Messrs. E. Turner and Sons, Ltd., of Cardiff. Sub-contractors engaged were:—

Western Trinidad Lake Asphalt Co., Ltd., asphalt work; Penarth Concrete Co., Ltd., stairs; Connies and Meaden, Ltd., constructional steelwork; Trussed Concrete Steel Co., Ltd., steel reinforcement for stairs; The Kleine Co., Ltd., floors; J. G. Proger and Sons, Ltd., heating; John Williams and Sons (Cardiff), Ltd., steel windows; Booth and Bomford, Ltd., electrical installation; Finnis and Ruault, roof tiling; H. H. Martyn and Co., Ltd., fibrous plasterwork, etc.; The Express Lift Co., Ltd., lift; John Stubbs (Marble and Quarzite), Ltd., marble work to entrance; Williams and Borgars, Ltd., sanitary goods; Mayacoustics, Ltd., acoustic felt; Carter and Co., Ltd., tiles, etc.; Pilkington Brothers, Ltd., etched glass; Bristow Wadley and Co., Ltd., glazing; James Gibbons, Ltd., door furniture, locks, etc.; Armstrong Cork Company, Ltd., cork tiles; Venesta, Ltd., flush doors; Hollis Brothers, Ltd., wood block flooring; Bromsgrove Guild, Ltd., balustrading and handrails; Marble Mosaic Co., Ltd., terrazzo work to staircases, etc.; Bath Cabinet Makers Co., Ltd., panelling and fittings to council chamber; Korkoid Decorative Floors, Korkoid flooring; and R.I.W. Protective Co., Ltd., stainproofing to stone.

Left: THE COUNCIL CHAMBER.

TEMPLE OF PEACE AND HEALTH, CARDIFF.



THE HALL OF JUSTICE, LOOKING TOWARDS ENTRANCE.

Left: ENTRANCE HALL, SHOWING DOORS TO HALL OF JUSTICE.

MR. PERCY THOMAS, P-P.R.I.B.A., ARCHITECT.

"WOMAN'S FAIR AND EXHIBITION," OLYMPIA

In planning the layout for the "Woman's Fair and Exhibition," which opened at Olympia on Wednesday and closes on November 26, the architect, Mr. C. Beresford Marshall, F.R.I.B.A., has worked in co-operation with the Design and Industries Association, the British Colour Council, National Institute of Industrial Psychology, the British Institute of Adult Education, and the Society of Industrial Artists.

The "Woman's Fair and Exhibition" is to be devoted exclusively to the needs, ideas and achievements of the woman and home of to-day, and we are told that professional, industrial, scientific and educational groups have pooled their resources in the planning of various features.

Principal Features.

The Grand Hall has for its central point an illuminated colonnade by Mr. Oliver Bernard, L.R.I.B.A., surmounted by a 25-ft. figure in plaster of the Venus de Milo. Surrounding this centre-piece is the B.E.D.A. exhibit, planned by Mr. Raymond M'Grath, A.R.I.B.A. The decoration is by a draped velarium in multi-coloured rayon, one end of the hall being treated with a colour-change in lighting, while at the other end is a photographic reproduction of Botticelli's "Birth of Venus," enlarged to the size of 55 ft. by 33 ft. 6 in.

In the National Hall is the Building Section. Here is a block of up-to-date flats, designed by Mr. A. C. Cowtan, A.R.I.B.A., in association with Messrs. Marshall and Tweedy, FF.R.I.B.A. Another interesting feature in this hall is the "Week-End Cottage," designed by Le Corbusier and Mr. Clive Entwistle, and built and furnished under the direction of Mr. Arundell Clarke.

The cottage is practically square, low built, with a flat roof on which flowers can be grown. Its brick walls are washed pale eau-de-nil. Accommodation comprises three bedrooms to sleep five people, living-room, kitchen, bathroom, garage and patio. The living-room has a brick floor covered with sheepskin rugs and the brick walls are exposed. A long elm refectory table faces a log fire, and food from the kitchen is passed to the table through a conveniently situated hatch. The room obtains all the sun from the south.

On either side of the centre staircase in the National Hall are the "Staybrite" steel displays, which stands have been specially designed by Mr. C. Beresford Marshall, F.R.I.B.A.

The Empire Hall, with its lower ceilings, is devoted to the leisure and design sections. The latter section, organised by the Design and Industries Association, is devoted to the subject of good design in manufactured goods, and deals mainly with furnishing, the goods shown including glass and china, furniture, textiles, heating and lighting, etc.

This exhibition, which occupies the ground floor of the Empire Hall, is of special interest because many manufacturers are showing products selected on account of their standard of design.

In the Annexe is the theatre, which seats nearly 1,500 people, and is built on miniature "Hollywood Bowl" lines. The heated swimming-pool covers an area of 1,000 sq. ft. Special arrangements are being made for diving demonstrations and water cabarets. The surround area is laid out as a representation of the Hollywood Gardens.

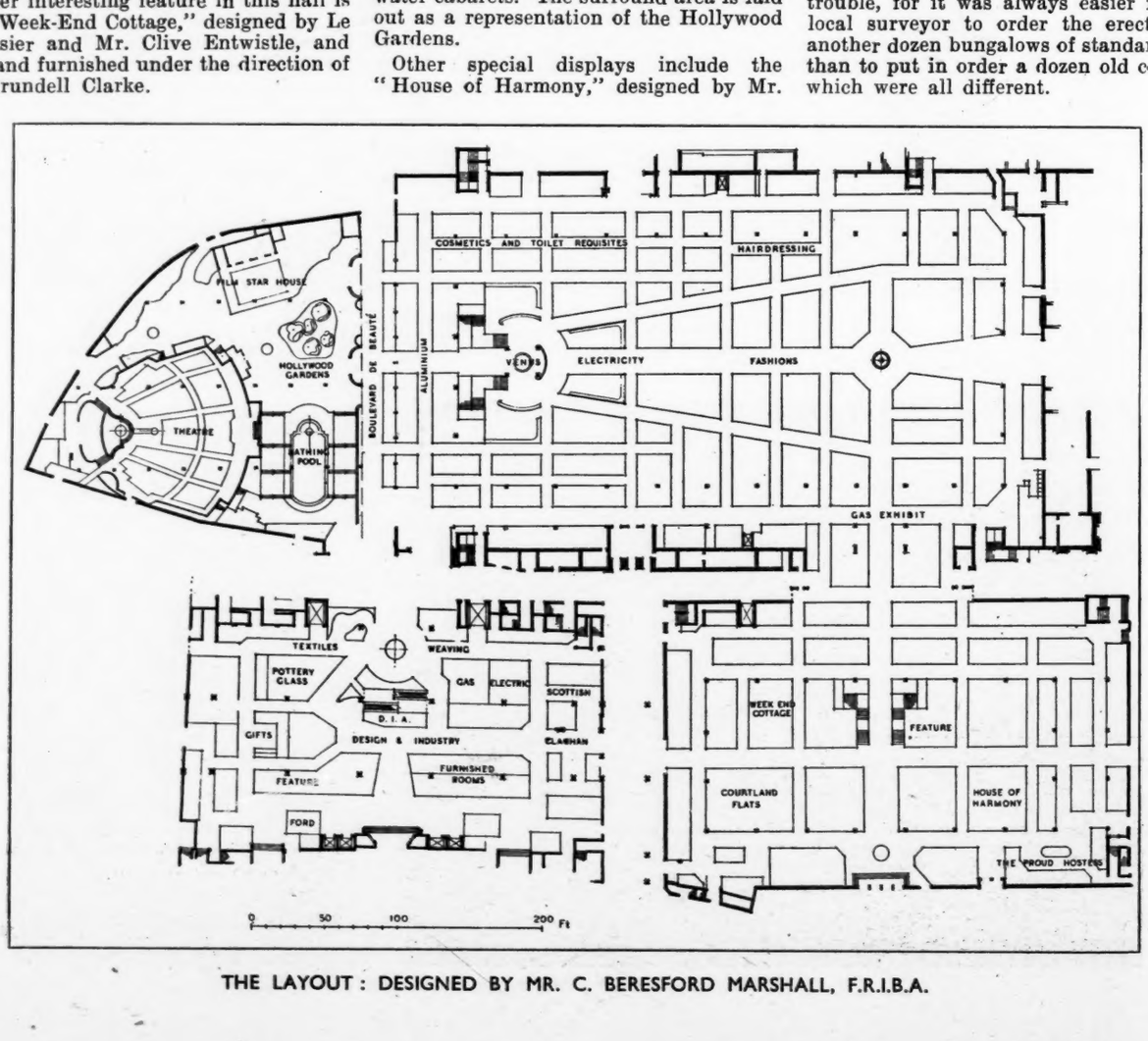
Other special displays include the "House of Harmony," designed by Mr. F. R. Yerbury, and a "Mothers' House," designed to provide complete pre-natal, maternity, and post-natal services. Queen Charlotte's Hospital, we learn, has actively co-operated in the preparation of the plans with the architect, Mr. E. Stanley Hall, F.R.I.B.A. The complete model, three full-size rooms—consulting-room, bedroom and bathroom—is shown.

Another interesting feature is a kitchen, sponsored by the Health and Cleanliness Council, and designed by the Kitchen Planning Centre. This is shown in the "Mother and Her Children" section. The kitchen is approximately 17 ft. by 13 ft., including the dining-cabin, which is built alongside. Designed for the small family in which the mother does most of the work of the household, it is all-electric.

There is an electric drying cupboard for drying wet coats as well as laundry.

Preservation of Rural Scotland.

Sir John Stirling Maxwell, Bart., addressing a gathering under the auspices of the Dumfriesshire branch of the Association for the Preservation of Rural Scotland, said that the Association was not out to resist change, but to ask that such changes as were made were made with due foresight and with some regard to the traditions of the country. They also thought that in a new housing scheme far more trouble should be taken with the design of houses and their layout, and that some attempt should be made to study local conditions and use local material. They also thought that more attention should be given to reconditioning old houses. Admittedly that gave more trouble, for it was always easier for the local surveyor to order the erection of another dozen bungalows of standard type than to put in order a dozen old cottages which were all different.



THE LAYOUT: DESIGNED BY MR. C. BERESFORD MARSHALL, F.R.I.B.A.

THE ART OF ARCHITECTURE.

In one of the late W. J. Locke's novels, a young writer, Adrian Boldero by name, attempted to put into one book all that had ever happened in life. The young man broke down and the book never appeared. We do not imagine that the authors of "The Art of Architecture"* attempted to put into one book all that had ever happened in architecture, for they have completed their book and have shown no sign of having broken under the effort. Nevertheless, the task they set themselves was an immense one, and it is no reflection upon their ability to say that it is one which is never likely to attain complete fulfilment.

The perfect book of this type would lead the reader comfortably to an understanding of architecture as we know it to-day, and on to architecture as it might be expected to become in the future. In this process the state of contemporary architecture would need to be shown as well-defined and purposeful, to provide the safe bridge between the past and the future. The fact that the authors have not found it possible to show present-day architecture in this light is not due to any incapability of reasoning, but to the indeterminate stage at which the art has arrived in this year of grace. The reaction which is almost inevitable is the same that we often feel at the inconclusiveness of many great contemporary building schemes, namely, that it is a pity that great efforts cannot await a more convinced generation before they are committed to fact. This book, nevertheless, is a great work.

The introduction is a masterly exposition of the panorama of architectural development compressed into four pages of good English; and the succeeding chapters of historical survey maintain the same high literary standard. The complexities of historical record produce the same perplexities of mind which other authors have found and to which they have bowed. It is indeed difficult to fit into any preconceived literary plan the inter-relationship between Oriental and Occidental architecture, for instance; or even that between the American Colonial style and that of the skyscraper. One can only record them in an incidental way and so place them as to interfere least with the progressive plan of the book. The pure historian is but slightly troubled by these difficulties. The teacher of an art will be more disturbed, and these authors are no less so.

Accordingly, the arrival at the contemporary period is somewhat disjointed, not through literary or philosophical deficiencies, but because the authors have not been able to place the times in their true relation to history, a difficulty of which we are all fully conscious, and which remains with us despite this valiant attempt towards mental adjustment.

It may be that the difficulty has no solution other than by waiting on events, and it may be that the invasion of the machine into civilised life will prove to be an historical interruption like the invasions of the Saracens or the Roman occupation of Britain. If that proves to be the case, the historian of the future may find it an easier task to reflect the clear stages of architectural development up to his times.

Let it not be thought for one moment, however, that Messrs. Richardson and Corfiato have produced a redundant textbook, for that suggestion would be both unjust and unworthy. They have succeeded, at least as completely as has any previous general historian, in setting down an easily digested and convincing picture of architectural history up to the last century. In doing so, they have gathered together a useful and discriminating selection of plates and illustrations which form a graphic complement to the text. The volume is presented in an equally worthy form with clear print, good reproduction, and pages which open comfortably enough to make the handling of a thick volume quite a delight.

We therefore commend this volume to the student of architecture as one likely to enrich his knowledge of the art. Should he hope to find in it some inspired analysis of contemporary problems, he may not find complete satisfaction, and he will remain in that large company of thinkers still striving to adjust the apparent inconsistencies of the age. But there will still remain to him the fruits of the labours of two men with alert minds, the ability to express themselves, and an obvious love for the art of which they are considerable exponents.

* "The Art of Architecture." By A. E. Richardson, A.R.A., F.S.A., F.R.I.B.A., and Hector O. Corfiato, S.A.D.G., F.R.I.B.A. The British Universities Press, Ltd. Price 42s. net.

BOOKS RECEIVED.

Pilgrim to the Left. By S. G. Hobson (London: Edward Arnold & Co.) Price 12s. 6d. net.

Surveying and Field Work. (2nd Edition) By James Williamson, M.Inst.C.E. (London: Constable & Co., Ltd.) Price 20s. net.

Theory of Structures. (2nd Edition.) By H. W. Coultas. (London: Sir Isaac Pitman & Sons, Ltd.) Price 18s. net.

CORRESPONDENCE.

(*Continued from page* 867.)

The London Builders' Conference.

To the Editor of *The Builder*.

Sir,—The two points selected by Sir Alfred Hurst from my letter seem worth a little further comment. They are competition and the case of the small builder.

Trade is so universal that it must be based permanently on a definite and unqualified policy. It must be either unrestrained competition, as it has been in England during the "Industrial Epoch" until quite recently, or it must be State controlled. Exceptions cannot be grafted upon competition, otherwise a multiplicity of trades would clamour for help. If it be said that such exceptions are now in operation, to wit, subsidies to agriculture, to house building and to depressed areas, I reply these are transitory expedients which lead to State control as surely as monopolies and price rings. Thus I regard the L.B.C. as a temporary expedient, which, from its complexity, can be only of limited application.

As to the small builders, Sir Alfred says that the L.B.C. has jealously safeguarded their interests, and that it is reaping the fruits of that policy in its membership. I must acecpt what he says, though, like Mr. Traviss, I should have preferred some numbers. I am still unable to see what use the mass of London and Provincial small builders can make of the system.

Our standard of housing, as Mr. Aylwin points out, takes a high proportion of our income, notwithstanding the increase in wages; but it must be remembered that rent includes many social benefits imposed by the State directly or through the local authorities.

If rent *qua* rent, that is, interest on land and buildings, is inflated by rings and combines, society is held to ransom.

I do not think that there is overcapitalisation in building. The enormous demand of the State for capital for rearmament and that of the local authorities for rehousing for persons displaced by clearances and overcrowding will prevent that. When sanity returns to the world and the armament race ceases, capital will be diverted and competition become keener. This will be offset to some extent by the continuance of the housing work of local authorities. When that is practically completed, the outlook for building may be unpromising unless further schemes are put in operation.

A. W. Crampton [F.S.I.].

THE R.I.B.A. NEW SESSION

The "Sessional Papers" programme of the R.I.B.A. starts on Monday, November 21, with a paper on "Economics of the Building Industry—Achievements and Anomalies," by Mr. Oliver W. Roskill. On December 5, Professor W. G. Holford, B.Arch.Liverpool, M.T.P.I., A.R.I.B.A., head of the Department of Civic Design of Liverpool University, who is one of the youngest men in England to hold a professional chair, will read a paper on "The Next Twenty Years." Professor Holford is a practising town planner, an architect, a university teacher, a classical scholar and one-time Rome scholar, and a member of the MARS Group.

After Christmas, on January 9, the awards of the annual prizes and studentships will be announced, and the work submitted in competition criticised. A fortnight later, on January 23, the President, Mr. Goodhart-Rendel, will address the students and distribute the prizes and medals.

Captain Sydney E. Redfern, LL.B., a solicitor with a wide experience of architectural professional practice, will read a paper on "Some Legal Aspects of an Architect's Practice." On February 20, Mr. John N. Summerson, B.A.(Arch.) Lond., A.R.I.B.A., will survey the "Great Landowner's Contribution to the Architecture of London." The subject is one that has often been raised but never fully studied. On March 6, Mr. W. T. Benslyn, A.R.C.A., F.R.I.B.A., will do something to remove a reproach that London pays little attention to people and work outside London, by surveying "Recent Architecture in the Provinces."

One of the Institute's most important nights is the occasion of the presentation of the Royal Gold Medal. This will be on April 3. The recipient, who this year will be a British architect, has yet to be chosen. On April 24, Professor A. E. Richardson, A.R.A., F.S.A., F.R.I.B.A., will read a paper on "Railway Stations"—a problem in architecture which very much concerns everyone. The subject is one of great historical interest, but no less of practical reference to present-day problems.

Four exhibitions are at present on tour, and are fully booked up for the whole session — Health, Sport and Fitness; Modern Schools; Airports and Airways, and the Small House Exhibition, recently shown with considerable success at the Institute. In addition, the Exhibition of Civic Centres, which has just completed a two years' tour, has had to be revived to meet special requests. The major exhibition for the year, Roads and Architecture, will be shown at the Institute during March, 1939, and will also tour.

The Annual Conference will take place in Dublin, where it will coincide with the Centenary Celebrations of the Royal Institute of the Architects of Ireland.

The R.I.B.A. Social Committee has organised a full programme of concerts and dances, and there are to be exhibitions of work by the Camera Club. A notable event will be a Social Committee Party on December 12. The Music Group gave hospitality to the Schubert Society on October 31, and the Dance Club has four dances between November 11 and April 21.

Scratch-dials and Sundials.

"Scratch-dials and Medieval Church Sundials" is the title of an interesting little illustrated booklet by W. T. Cole on the relation of history to scientific sundials. Copies, price 4d., may be obtained from the author, Stratford St. Andrew, Saxmundham, Suffolk.

LONDON BUILDING BY-LAWS—XXXVI

By ALFRED H. BARNES, F.R.I.B.A., M.I.Struct.E., and C. ROLAND WOODS, M.B.E., LL.B.

PART VIII.—MISCELLANEOUS (*continued*).

By-law No. 132 (7) relates to hearths, and will be discussed later when hearths are being considered.

By-law No. 132 (8) forbids cutting into any part of a chimney except for certain specified purposes. The requirements are evidently based on those of Section 69 (20) of the London Building Act, 1930, which in turn repeated what had been said in Section 64 (20) of the Act of 1894, and this again is practically identical with Section 20 (16) of the Act of 1855.

The new by-law repeats much of the quaint phraseology of 1855, even to the provisions for the repair of the family smoke jack, and merely adds to the list of "operations" for which a chimney may be cut into, that of "letting in or removing or altering flue pipes or funnels for the conveyance of products of a gas fire or gas fired appliance," and of "forming an opening for the purpose of complying with the provisions of By-law No. 132 (2) (j)." It may be assumed that this reference to By-law No. 132 (2) (j) relates to provisos (*a*) and (*b*) permitting the use of a common flue for more than one fire in the case of a pre-by-law building (subject to the district surveyor's approval), or in any case when the fires are in the same room.

By-law No. 132 (9) requires all soot doors and frames to be at least 15 in. from any combustible material, and ventilating valves to be 12 in. In the London Building Act, 1930, this provision, as regards the safe positioning of soot doors, was concurrent with Section 69 (2) requiring soot doors, where flues were at an angle flatter than 45 degrees, and the requirement as regards situation of valves was made in Section 69 (20) where "making any opening for the insertion of ventilating valves" was included among the "operations" for the purpose of which a chimney might be cut into.

The inclusion in Section 69 (20) of the requirement as regards the situation of a valve in relation to combustible material may have been somewhat unfortunate in the Act of 1930 inasmuch as (apart from the accidental inference that the proviso related only to cases where there was more than one valve in an opening) the application of the restriction was thereby limited to cases where "a chimney shaft, jamb, breast, or flue was cut into," leaving the valve uncontrolled as regards its position when built into a new chimney. By removing the requirement from its context relative to cutting away, and expressing it as a separate rule of general application, the new by-law brings the valve under control in all cases.

Paragraphs (10) and (11), with the exception of (10) (*b*) (which refers to hearths) relate to the keeping of woodwork remote from flues, and correspond respectively with Sub-sections (21) and (22) of Section 69 of the London Building Act, 1930.

Section 69 (21) of the Act laid it down that timber or woodwork should not be placed in any wall or chimney breast nearer than 12 in. to the inside of any flue or chimney opening, and then, in Subsection 22, went on to say that wooden plugs should not be driven nearer than 6 in. to the inside of any flue or chimney opening—as though wooden plugs did not come within the category of "timber or woodwork."

The corresponding By-law No. 132 (10) refers to "woodwork" only, and avoids the contradiction indicated by employing the phrase "woodwork (other than wooden plugs) shall not be placed," etc. The by-law also relaxes the requirement by reducing the requisite distance between any woodwork and the flue, from the 12 in. specified in the old Acts to 9 in.

Paragraph (*c*) of Sub-section 21 of the Act of 1930 required that where the material about any chimney was less than 8½ in. thick, if any woodwork were within 2 in. of the face of the material, the face of the material was to be rendered. From the nature of things, it is plain that the face referred to must be the outer face and not the inner. Nevertheless, it is indicative of the more careful drawing of the by-laws that in making the same requirement, the by-law—No. 132 (10) (*c*)—specifically refers to "the outer face."

It has already been noted that proviso (*h*) to by-law No. 132 (2) required that where a chimney passed through a floor or roof within 9 in. of any combustible material or "behind or against" any woodwork, the outside of the chimney should be rendered. The meaning of "behind or against" might have been problematic. By reading 132 (2) (*h*), together with 132 (10) (*c*), the requirement becomes, in the majority of cases, a definite measure of inches.

By-law No. 132 (11), in requiring that wooden plugs shall not come within 6 in. of any flue, and iron holdfasts and other iron fastenings within 2 in., is (but for slight verbal modifications) identical with Section 69 (22) of the Act.

Those clauses of by-law No. 132 which have been so far considered cover the requirements as to chimneys of the smaller type without reference to their purpose, except where special mention is made as to their application to gas fires. These requirements are of a basic nature applicable to normal cases. They are subject, therefore, to modification with regard to user. Consequently there follow in the by-laws a number of provisions in the nature of provisos to the basic rules laid down—some in the direction of restriction and others in the direction of relaxation.

It was laid down explicitly in Part VII in regard to chimney shafts that the subject of control was the material surrounding a flue. Similarly, in Part VIII, although not directly stated, it is obvious that the principal consideration is the nature of the enclosure of a flue. From the point of view of legal control, the main consideration must necessarily be the same in the case of flue pipes. The by-laws, however, differentiate between chimney and flue pipes (probably for reasons of verbal convenience), and Part VIII, besides giving the general rules with regard to chimneys and the beforementioned provisos with respect to their user, contains rules for the use of flue pipes, regarding them as differing from chimneys and therefore not coming within the requirements appropriate to chimneys. In this the by-laws follow the precedent of Section 71 of the Building Act of 1930.

The rules which constitute what are practically provisos to the general rules appertaining to chimneys and the rules relating to the use of flue pipes are somewhat distributed in the by-laws; but it will be convenient to discuss them here *ad seriatim*, reserving the subject of hearths for similar discussion subsequently.

(*To be continued.*)

EXHIBITION ARCHITECTURE.

A LECTURE.

Mr. Howard Robertson, F.R.I.B.A., S.A.D.G., gave a lecture, illustrated with lantern slides, on the subject of "Exhibition Architecture," at the Reimann School, 4-10, Regency-street, S.W.1, on Friday, October 28.

Mr. Robertson began by saying that architecture and display were really one and the same thing when applied to exhibitions, and therefore the architect and displayman must work together, one being the specialist who dealt with the stands, the other with groups of stands.

The equipment of the display artist was of paramount importance for success. He had got to know human nature very well, particularly when dealing with the client, for however strongly he felt about his design he must not tell the client that he was right and the client wrong. It was necessary to have a knowledge of what people wanted and what they would demand, coupled with powers of flexibility and resource to help "wheedle" the client round to one's own point of view.

"The display artist has to be essentially an artist—*i.e.*, he must be able to draw and present his ideas articulately to the client. He must learn to adapt the type of 'presentation' to the type of client. It would not do, for instance, to submit a rather surrealist design to the man who has no idea beyond the Diorama. The display artist must have a good sense of restraint. Volubility always kills a display. A sense of values is essential. Keep up with the modern trends and demands of fashion. Read the fashion papers, watch ladies' hats and shoes—particularly the latter. Fashion is the mirror of what is going to be demanded by the public."

Continuing, the lecturer said the individual stand was the unit, or nucleus, of the exhibition. Where possible, the stand should express the character of the objects it was intended to display. This was simple in the case of tiles, and so forth, but became more difficult with, for instance, chemicals. The only thing then to do was to design something the public would care to look at. Everybody liked to see something moving—a free show. Cinema shows at exhibitions were an excellent way of getting people into a stand.

Sudden Effect.

Passing from the unit to the actual exhibition building, the architect must rely on a sudden effect, a "knock-out blow," to reduce the visitor to a state of mind in which the "hors d'œuvre" could be presented. This was often done with something quite simple or even trite, such as a globe or large stunt map.

"Only 10 per cent. of the people who go to an exhibition look twice at or are really interested in design," declared the lecturer. "Ninety per cent. may be described as 'stupid.' Therefore give them something simple to comprehend, even obvious. Once they say of your much-prized spectacle or prestige effect, 'What is that?' you are sunk."

The structure of the exhibition building, windows, beams, etc., had to be coped with whether the exhibition architect liked it or not. A good display artist would try to bring these difficulties into his scheme so that it appeared to be built into the structure. It was also important to remember that people in exhibitions got very tired. Too often the beginner in design reckoned without fatigue and did not provide seats. It was a good policy to take advantage of the law of contrast and place ordinary objects in unusual surroundings. Alternatively, certain things—glass, cutlery, etc.—might be displayed as used in ordinary life. Large expanses of glass made a building hot, so it was wise to have cool-looking exhibits inside—mass psychology worked this way.

Concluding, the lecturer said: "If you want people to see the whole of your pavilion, be sure that everything is done to facilitate circulation. Remember the tired feet and lead people along easy routes."

MODERN BUILDING PRACTICE

II. THE STRUCTURAL ENGINEER'S PART.

By P. C. G. HAUSSER, M.Inst.C.E.

II.—THE GROWTH OF WELDING.

Of recent years a new method of fabricating and joining structural steelwork has become available through the medium of welding either by the electric arc or by oxy-acetylene. This method of construction is still in its infancy as regards structural work, but promises to have a tremendous future and is likely to revolutionise design. From the design point of view, it is in many ways the ideal method of construction, in that it readily enables steel to be built up into the most efficient shapes for the purpose, without any excess weight, such as rivet-heads, connecting angles, etc.

A few examples will make this clear. Taking a plated beam, for instance: in riveted construction this consists of a basis joist of rolled section, on the flanges of which are added one or more plates to give the necessary additional flange area. The resulting section is considerably heavier than would be the case if the plates could be stuck on, as it were. The net flange area available for resisting the load is considerably less than the gross flange area, owing to the deductions that must be made for rivet-holes. The rivet-heads themselves add to the weight, and the flange-plates have to be made 1 ft. 6 in. or so longer than is theoretically necessary in order to introduce sufficient rivets for the plate to take up its load.

For larger sections where a plate girder is required, the difference is still more marked. Quite a considerable part of the weight of a plate girder is in the flange angles and stiffener angles. In each of these angles one leg is required for enabling a riveted connection to be made and adds very little to the strength of the member.

By the use of welding these legs can be entirely avoided, and a considerable saving in weight obtained. Further weight is saved by the omission of rivet-heads and the avoidance of the laminated flanges usual in riveted construction. In a welded girder the flanges can be built up of thick plates welded to the web, the thickness of the plate and/or width of the plate being reduced where the bending moment diagram permits. This reduction in section can take place at the theoretical point, and the waste due to over-run of flanges is avoided. Built-up welded sections consisting of two flange-plates and a web-plate can be used instead of heavily plated beams, and it is easy to have beams of varying depths to suit theoretical strength or architectural requirements.

For column sections, welded construction enables constant dimensional columns to be readily constructed, with consequent benefit to casing details and architectural requirements. Again, the connections between beams and columns are much neater than with riveted construction, and there is no difficulty in obtaining continuity between beams and columns where this is required.

A completely all-welded building designed for full continuity between beams and columns is analogous to a reinforced concrete building, and should have all the advantages of structural steelwork with the continuity of reinforced concrete work, but without the disadvantages of the latter. Another advantage of welding over riveted construction is in the ease with which rigid joints can be constructed. This leads at once to the possibility of rigid frame construction, which in certain circumstances has many advantages.

In connection with welded work there is still some doubt in the minds of many engineers as to the reliability of the welding, especially when this is carried out on the site. Unfortunately, up to the present no practical non-destructive test of the finished weld has been found which can give information about every weld on the site. By a careful control of procedure, however, the use of skilled welders, efficient plant, and careful visual inspection at every stage of the work, there is no reason to anticipate that the site welding cannot be carried out with complete reliability, and, at any rate, with no greater variation than is inevitable with reinforced concrete work.

On the Continent many bridges are constructed on the Vierendeel principle of all-welded construction, and it is claimed for these that they are more economical in weight, the truss is stiffer than a triangulated truss, the stresses in the members can be more accurately determined, and the resulting bridge is more pleasing in appearance than the more conventional triangulated riveted structure. The Vierendeel form of construction is also sometimes very useful in building work. The absence of diagonal members enables doors, windows, ducts, etc., to be run through the truss without difficulty.

Continental and British Examples.

In a paper read before the International Congress for Steel Development, Stefan Bryla mentions ten tall welded steel-frame buildings constructed in Poland between 1929 and 1934, and gives particulars of the saving in weight obtained. This varies from about 20 per cent. for an all-welded building to about 10 per cent. for a building in which all shopwork was welded and all sitework riveted.

In Belgium the new buildings for the Science Museum at Brussels are being constructed of all-welded steel-frame construction, full continuity being provided for between the beams and columns. In this building, owing to its great height, the

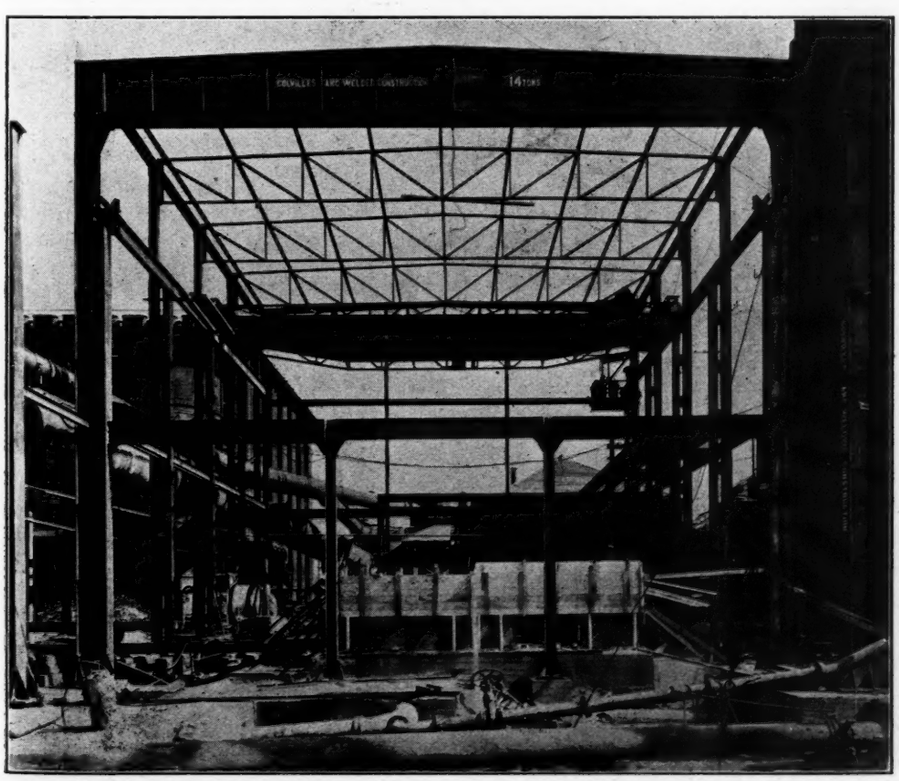


FIG. 1.—POWER AND TURBO-BLOWER HOUSE: SHELL OF FIRST HALF OF BUILDING.

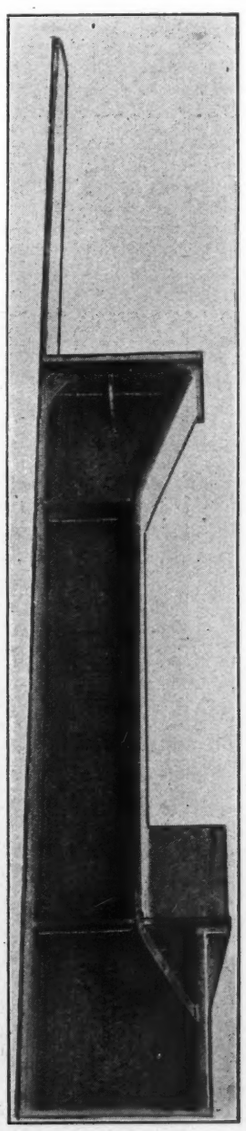
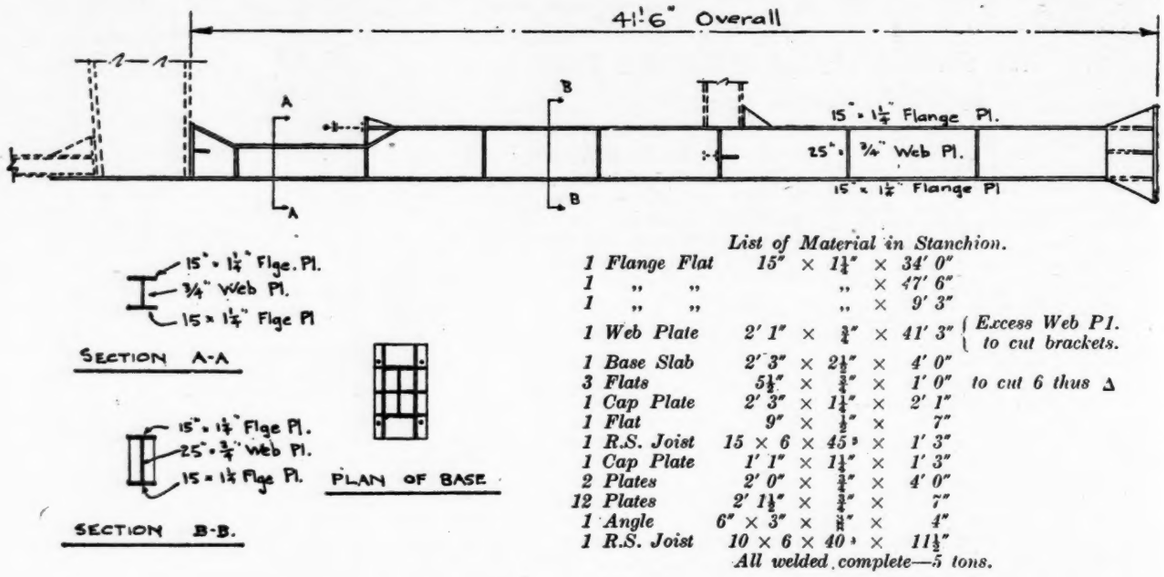


FIG. 2.—POWER AND TURBO-BLOWER HOUSE: DETAIL OF CAP AND COLUMN.



List of Material in Stanchion.

1	Flange Flat	15"	×	1¼"	× 34' 0"	
1	,, ,,			,,	× 47' 6"	
1	,, ,,			,,	× 9' 3"	
1	Web Plate	2' 1"	×	¾"	× 41' 3"	Excess Web Pl. to cut brackets.
1	Base Slab	2' 3"	×	2½"	× 4' 0"	
3	Flats	5½"	×	¾"	× 1' 0"	to cut 6 thus Δ
1	Cap Plate	2' 3"	×	1¼"	× 2' 1"	
1	Flat	9"	×	½"	× 7"	
1	R.S. Joist	15 × 6	×	45 lb	× 1' 3"	
1	Cap Plate	1' 1"	×	1¼"	× 1' 3"	
2	Plates	2' 0"	×	¾"	× 4' 0"	
12	Plates	2' 1½"	×	¾"	× 7"	
1	Angle	6" × 3"	×	⅜"	× 4"	
1	R.S. Joist	10 × 6	×	40 lb	× 11½"	

All welded complete—5 tons.

FIG. 3.—POWER AND TURBO-BLOWER HOUSE: DETAILS OF ONE OF MAIN STANCHIONS.

foundations are of massive construction, and consist of heavy welded plate girders about 10 ft. deep, welded together with full continuity to form a massive box raft. All the site connections are welded, and, despite the very heavy nature of the welding required, no difficulty is being experienced with the work, which is proving rapid and economical.

In Liége the new extension to the University buildings has been built with a steel frame in the form of a number of rigid portals. This is claimed to have resulted in considerable economy in the depth of the beams and a useful saving in the height of the building. Arched roof trusses of portal frame type, the sections being a plate girder form of construction, have been extensively used on the Continent, and the result is a graceful and economical structure.

It is of interest to notice some of the details of recent constructions in this country and abroad, and the accompanying photographs and details will illustrate this. A recent example of an all-welded multiple-storey steel building constructed in this country is that of the new power and turbo-blower house by the Colville Constructional Co., Ltd., at Clyde Ironworks. The building is a turbo-blower station for blast-furnace plant, and is of steel-framed construction with brick panel walls. It is rectangular in plan, 140 ft. long, 55 ft. 6 in. wide and 45 ft. high to lower eaves level. The height of the three centre panels is continued to 75 ft., and on these a platform is formed 43 ft. by 58 ft., for a cast-iron tank 37 ft. by 49 ft. to hold 80,000 gallons of

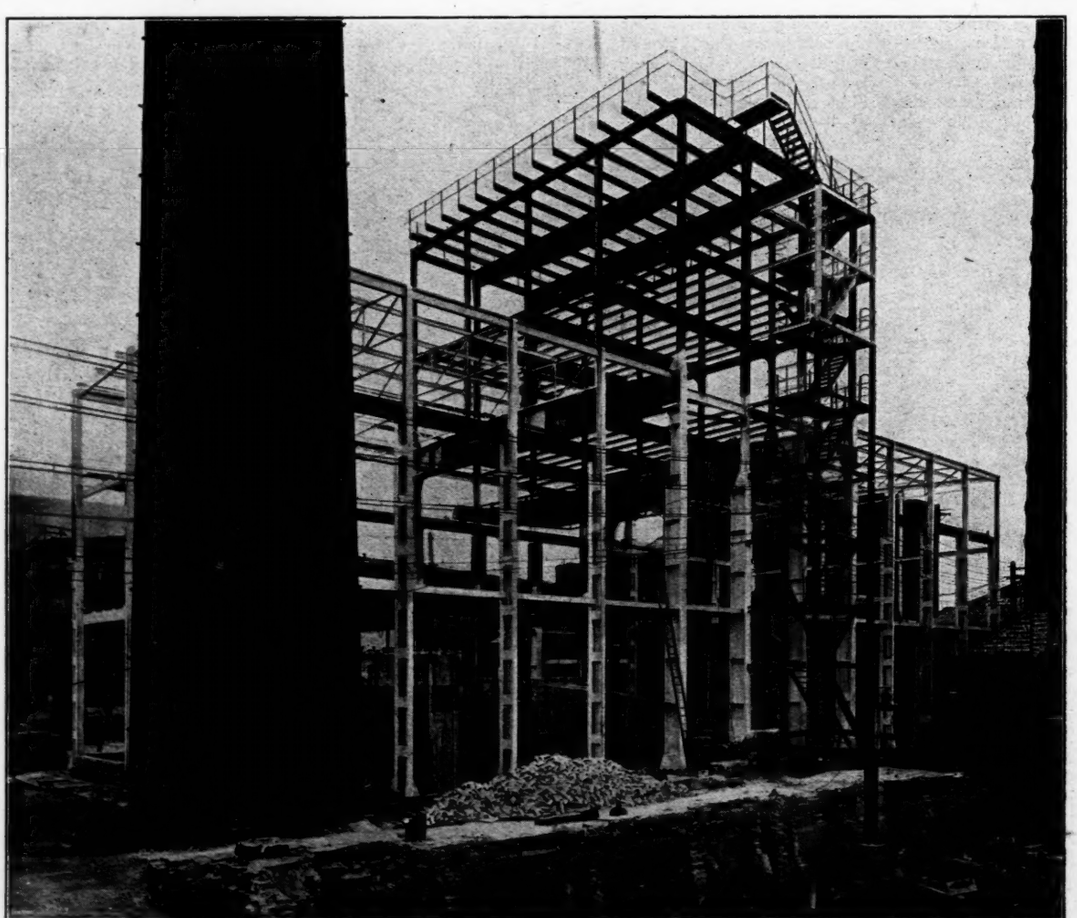
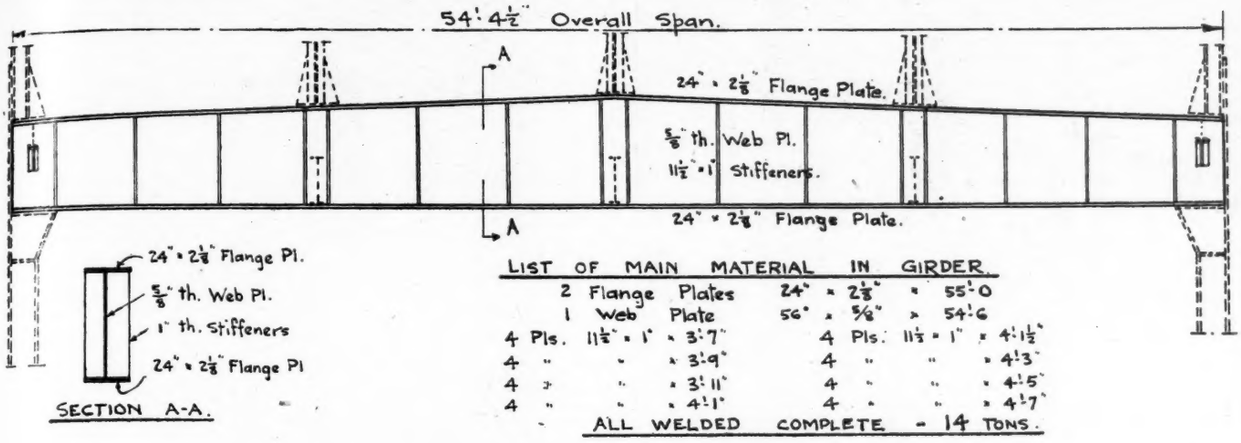


FIG. 4.—POWER AND TURBO-BLOWER HOUSE: VIEW OF COMPLETED FRAMEWORK.



LIST OF MAIN MATERIAL IN GIRDER.

	2	Flange Plates	24" × 2⅛"	×	55'·0		
	1	Web Plate	56" × ⅝"	×	54'·6		
4	Pls.	11½" × 1"	× 3'·7"	4	Pls.	11½" × 1"	× 4'·1½"
4	"	"	× 3'·9"	4	"	"	× 4'·3"
4	"	"	× 3'·11"	4	"	"	× 4'·5"
4	"	"	× 4'·1"	4	"	"	× 4'·7"

ALL WELDED COMPLETE - 14 TONS.

FIG. 5.—POWER AND TURBO-BLOWER HOUSE: DETAIL OF MAIN PLATE GIRDER

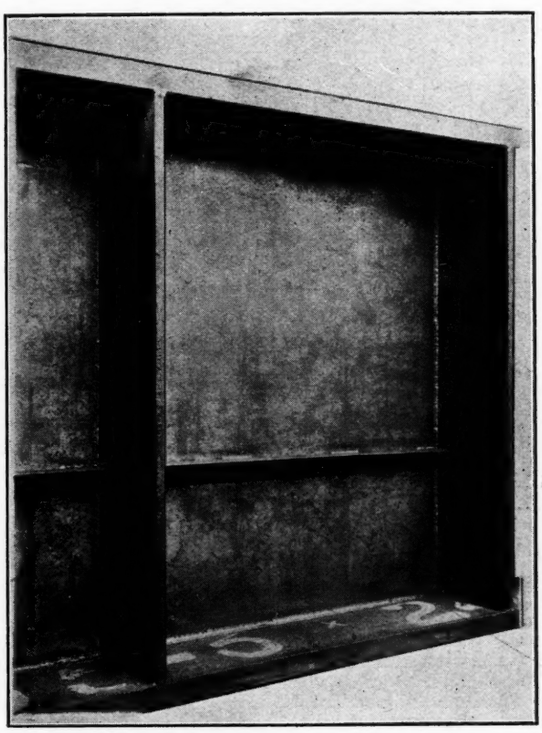


FIG. 5A.—POWER AND TURBO-BLOWER HOUSE: VIEW SHOWING INTERMEDIATE STIFFENERS ON PLATE GIRDER.

water. The first floor is 17 ft. 6 in. above ground-level, and is of concrete and filler-joist construction. A 5-ton overhead electric travelling crane covers the whole area.

Figures 1 and 4 give a general idea of the framework of the building, and the clean lines obtained by the use of welding should be noticed. Figures 2 and 3 show details of one of the main stanchions. On Figure 3 the neat arrangement of the details for the brackets for the crane girder and the stanchion caps and bases should be noted, and also the simplicity of fabrication and small number of parts in the specification of material. Figure 5 is a detail of one of the main plate girders carrying the tower structure, and Figure 5A shows the clean appearance of the finished work. Figures 6 and 7 are details of the double-battened columns supporting the crane track and roof of the building.

The method of attachment of the batten plates in Figure 6 and the economical arangement of stiffeners in the base detail (Figure 7) are noticeable. Figures 8 and 9 show the finished column, and the cleanness of line and freedom from projecting cleats, rivet and bolt-heads, etc., is particularly striking.

As a result of the experience gained in this building, the conclusion was reached that the cost of fabrication is definitely in favour of welding, and, as regards sitework, although for various reasons it was difficult in this particular building to arrive at a

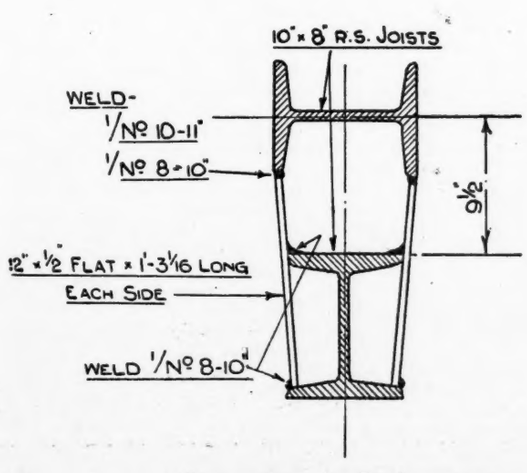


FIG. 6.

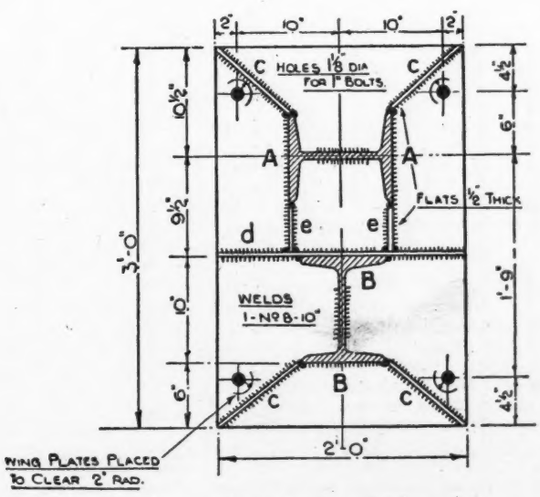


FIG. 7.

POWER AND TURBO-BLOWER HOUSE: DETAILS OF DOUBLE BATTENED COLUMNS SUPPORTING CRANE TRACK AND ROOF

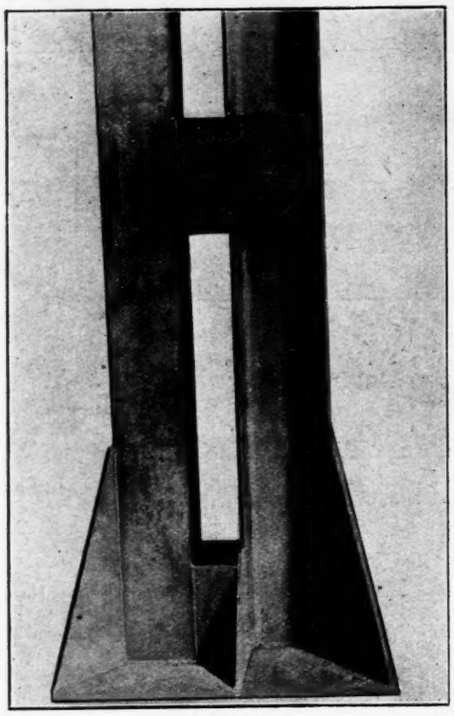


FIG. 8.

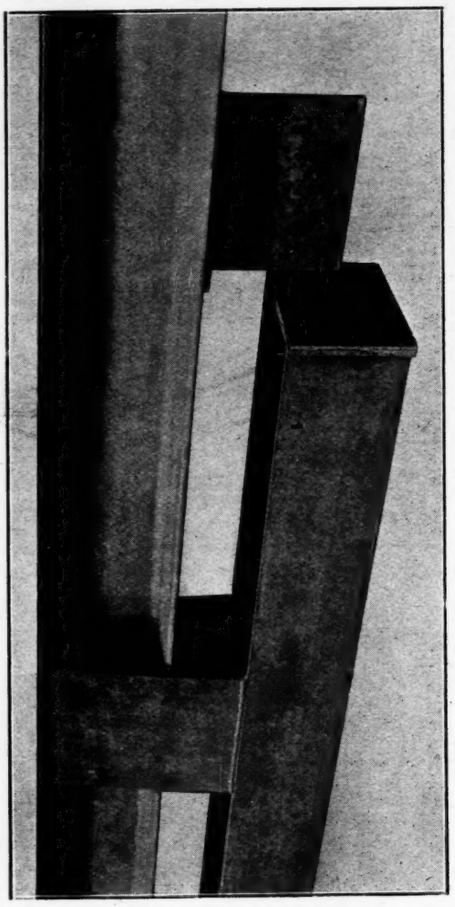


FIG. 9.

POWER AND TURBO-BLOWER HOUSE: FIG. 8 (ABOVE) AND 9 (RIGHT). VIEWS OF FINISHED COLUMNS.

reliable comparison between welding and riveting, the general conclusion was that welded site connections are slightly more expensive than bolted connections and of about equal cost to riveted site connections. As regards time of construction, with equally well-equipped shops, welded fabrications should not take any longer than riveted work.

(*To be concluded.*)

LAW REPORT

WIDOW'S CLAIM AGAINST STEELWORK CONTRACTORS AND SUB-CONTRACTORS.

Harris v. Dorman Long and Co., Ltd., and Others.

KING'S BENCH DIVISION.

Before LORD JUSTICE GODDARD (sitting as an additional Judge of the King's Bench Division).

This was an action by Mrs. Rebecca Maud Harris, of Woodside End, Alperton, Middlesex, to recover compensation for the death of her husband, Mr. Owen Llewellyn Harris, an electric welder, 26 years of age, who in January, 1937, died as the result of injuries he received through falling 90 ft. through a loose grating at Fulham Power Station, then in course of construction.

Mrs. Harris sued Messrs. Dorman Long and Co., Ltd., of Terminal House, Grosvenor-gardens, London, the main steelwork contractors; Messrs. James Howden and Co. (Land), Ltd., engineers, of Caxton House, Westminster, S.W., and Messrs. Allan Kennedy and Co., Ltd., of Vulcan-street, Middlesbrough, both of whom were sub-contractors.

On January 28, 1937, the deceased man was employed by Messrs. Howdens in installing certain washing machines and boilers at the Fulham Power Station. Messrs. Dorman Long and Co. were the main contractors for the structural steelwork of the building, and having, plaintiff alleged, the control and management thereof. Messrs. Allan Kennedy and Co. were sub-contractors who had contracted with Messrs. Dorman Long and Co. to supply, attach and maintain certain gratings and grids. On January 28, deceased, in the course of his employment, was on one of the upper floors of the structural steelwork when he stood or stepped upon a certain steel floor consisting of a number of steel gratings or grids which, it was alleged, ought to have been attached by bolts or clamps, or should have been so placed as not to be in danger of dropping through. Harris dropped through the opening to the floor below, and died as the result of his injuries. In these circumstances, Mrs. Harris, who claimed compensation on behalf of herself and her two young children, alleged that Messrs. Dorman Long and Co. were liable in having failed to use reasonable care to prevent the deceased man from falling through the floor.

Messrs. Dorman Long and Co. denied that they were guilty of negligence. They admitted that they were the main contractors for the structural steelwork of the station and that Messrs. Allan Kennedy and Co. were the sub-contractors, but that they (Messrs. Dorman Long and Co.) had not at any time the control or management of the steelwork material in this action, or of the power station, or of any part of the station. They further pleaded that none of the gratings or grids in question were ever under their control or management, but were supplied, erected, attached and maintained by Messrs. Allan Kennedy and Co.

The latter also denied negligence and liability, and also denied that they had contracted to maintain the gratings and grids in question.

Messrs. Howden and Co., who were joined as third parties, also denied liability.

After certain evidence had been given, his lordship, in giving judgment, dismissing the plaintiff's claim with costs, said that unfortunately she had not sued the one party who might have been liable, viz., the Fulham Borough Council. He said the accident was due to a panel of steel flooring being removed and not being properly replaced. Nobody knew who actually was responsible for laying the trap, but it appeared that at the time the Borough Council was in charge of the floor. There was no evidence of negligence on the part of any of the defendants, and if an action were now brought against the Council they could successfully plead the Public Authorities' Protection Act, since the action had not been brought within six months of the accident.

His lordship added: "I should have thought that all the parties ought to have put their heads together to decide who was to pay the damages to which this unhappy woman was obviously entitled."

He said that if Mrs. Harris had established liability he would have assessed her damages at £2,500.

Subsequently his lordship had before him an application on behalf of Mrs. Harris for compensation under the provisions of the Workmen's Compensation Acts, but which, owing to the illness of Mrs. Harris, was adjourned until a later date.

His lordship afterwards heard the application when Mr. Sellers, K.C., for Messrs. Howdens, the employers, contended that no reasonable cause had been shown why it should not have been made within the statutory period.

His lordship reserved his judgment on this question.

Mr. Rewcastle, for the widow, stated that since the hearing of the action the Fulham Borough Council had made her an *ex gratia* payment of £50.

His lordship, in delivering his considered judgment, held that no reasonable cause had been shown why the claim under the Workmen's Compensation Acts was not brought within the statutory period. The application of Mrs. Harris was accordingly dismissed.

THE THERMAL INSULATION OF BUILDINGS

NOTES FROM THE INFORMATION BUREAU OF THE BUILDING RESEARCH STATION.*

PART I.—GENERAL PRINCIPLES.

INTRODUCTION.—In all cases where the interior of a building has to be maintained at a temperature different from that of the outside air, the degree of insulation afforded by the structure is of primary importance in determining the heating or cooling load : the equipment provided for heating or cooling the building must be carefully considered in relation to this factor. Under the climatic conditions prevailing in this country problems of thermal insulation most commonly arise in connection with the heating of buildings in winter. Recent advances in the technique of air-conditioning and the cold-storage of foodstuffs, however, are bringing into prominence the converse case of rooms maintained colder than their surroundings. Whatever the direction of heat leakage the problem must be regarded as one of a balance of costs, for by paying adequate attention to the question of insulation, considerable savings in heating or cooling costs can frequently be effected. In every case the increase in the cost of the building entailed by providing additional thermal insulation must be weighed against the anticipated economies in fuel or power. There is always an optimum condition beyond which it is uneconomic to go.

The object of the present note is to give in brief outline the general principles involved in any problem of thermal insulation. To avoid any confusion it is assumed that the leakage of heat to be considered is between two bodies of air at different temperatures, with the structure intervening. This excludes the special case of heating by sunshine. Insulation against radiant solar heat may, with advantage, follow quite different principles, and will form the subject of a separate note.

Apart from any saving which may result from the " correct " thermal insulation of a building, it is frequently possible by the same means to minimise trouble due to condensation. In a poorly insulated building cold outside conditions cause serious cooling of the internal surfaces of the shell, which may result in the deposition of atmospheric moisture on these surfaces by the process of condensation. Better thermal insulation of the structure lessens the surface cooling and can in many cases prevent condensation. Other advantages arising from the correct use of thermal insulation are to be found in the reduction of thermal movements in buildings, the lessening of pattern staining and, for a given supply or extraction of heat, the shortening of the time required for the heating or cooling of a building.

It should be emphasised at the outset that the property of thermal insulation is not confined to a particular group of building materials. All the materials employed in building afford some degree of thermal insulation, although it is usual to class as " thermal insulating materials " those which are used specifically to increase the thermal insulation of a building the structure of which is determined by other factors. The structure of a building which is designed solely to meet the requirements of stability, rain exclusion, etc., will thus, incidentally, provide some thermal insulation.

Unit of Measurement.

The thermal insulation value of a structure is measured by the amount of heat which will pass from the air on one side to the air on the other side of the structure. In the units commonly employed in building, this heat is measured by the number of British Thermal Units which will pass under steady conditions in one hour across an area of one square foot in a direction perpendicular to the area, when the difference in temperature between the air on one side and the air on the other side of the structure is one degree Fahrenheit. This value is known as the air-to-air thermal transmission coefficient.

In order to obtain a figure for the air-to-air thermal transmission coefficient of a structure, it is necessary to know the thermal conductivities of the materials which make up the structure and also something of the environmental conditions on both sides of the structure. Before the method is discussed by which the air-to-air thermal transmission coefficient of a structure can be obtained, it is necessary to understand clearly what is meant by the terms " thermal conductivity," " thermal conductance," " thermal resistivity," " thermal resistance," " surface resistance," and " air-to-air resistance," and the relationship which exists between these terms and the term " air-to-air thermal transmission coefficient " referred to above. Confusion between the above-mentioned terms is a common cause of error and misunderstanding whenever this subject is discussed. It is important that whenever figures for any of these terms are used, their significance should be kept clearly in mind.

Thermal Conductivity.

The thermal insulation values of building materials are commonly expressed as " thermal conductivities." The thermal conductivity of a homogeneous material may be defined as the rate of heat passing under steady conditions, per unit area, and per unit temperature gradient, in a direction perpendicular to the area. In the case of building materials, thermal conductivity is expressed as the number of British Thermal Units passing per hour across an area of one square foot, when the difference between the surfaces temperatures is one degree Fahrenheit per inch of thickness.

Thermal conductivity, it should be noted, varies only as between one material and another material.

Thermal Conductance.

The term thermal conductance takes into consideration the thickness of the material or structure. For a homogeneous material, the thermal conductance varies inversely with the thickness. On the same standards as used in measuring thermal conductivity, thermal conductance is the number of British Thermal Units passing per hour across an area of one square foot of the material or structure (which may be of any thickness) when the surface temperatures differ by one degree Fahrenheit.

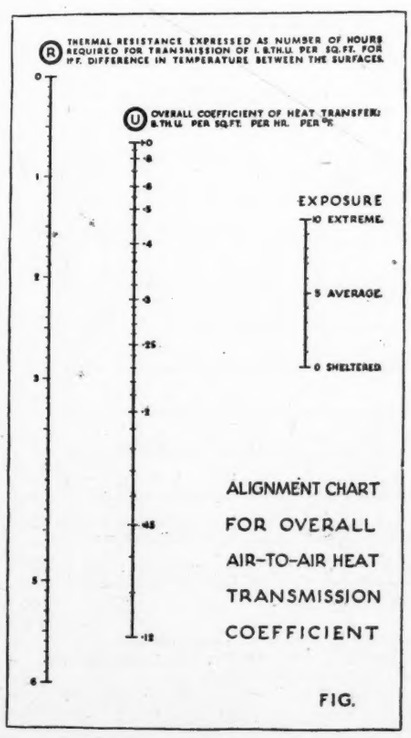

R THERMAL RESISTANCE EXPRESSED AS NUMBER OF HOURS REQUIRED FOR TRANSMISSION OF 1 B.TH.U. PER SQ.FT. FOR 1°F. DIFFERENCE IN TEMPERATURE BETWEEN THE SURFACES.
U OVERALL COEFFICIENT OF HEAT TRANSFER B.TH.U. PER SQ.FT. PER HR. PER °F.
EXPOSURE
10 EXTREME.
5 AVERAGE.
0 SHELTERED.
ALIGNMENT CHART
FOR OVERALL
AIR-TO-AIR HEAT
TRANSMISSION
COEFFICIENT
FIG.

FIG. 1.

In order to understand the difference between " thermal conductivity " and " thermal conductances," the example of a window glazed with, say, 26-oz. glass may be considered. Glass, considered as a material and compared with, say, a metal, has a low thermal conductivity; glazing, however, considered as a structure which is only ¼ in. thick, has a high thermal conductance compared with, say, a brick structure which is 14 in. thick.

For practical purposes, it is convenient to work, not in terms of thermal conductivities and conductance, but in reciprocals of these units—the " thermal resistivities " and " thermal resistances."

Thermal Resistivity.

The thermal resistivity, or, more commonly, the resistance per unit thickness, of a material may be defined, in the same units used in the case of thermal conductivity and conductance, as the number of hours required for the transmission of one British Thermal Unit per square foot, when the difference between the surface temperatures is one degree Fahrenheit per inch of thickness.

Thermal Resistance.

The thermal resistance of a material or structure is the number of hours required for the transmission of one British Thermal Unit per square foot of the material or structure (which may be of any thickness) when the surface temperatures differ by one degree Fahrenheit.

The advantages of dealing in terms of resistivities and resistances instead of conductivities and conductances, are, firstly, that the resistance of a homogeneous material varies directly as its thickness, and can, therefore, be readily calculated from a value per unit thickness, and, secondly, that the total resistance of a composite structure can be obtained by direct addition of the resistances of the component layers.

Surface Resistance.

While the total resistance of a structure is of great importance in determining the rate of flow of heat from warm air on one side to cooler air on the other, it is not the only factor. At the one side of the structure, heat has to be transferred from the air to the surface of the structure, and at the other from the surface of the structure to the air. In each of these transfers there is a certain resistance, which must be added to the resistance of the structure. The value of these resistances varies with the environmental conditions and is lower when air moves rapidly across the surface. It is worth nothing that the heat flow through thin membranes of high conductance, such as glass, or some of the sheeting materials used in roofing, is almost entirely controlled by the surface effects.

Average values for the surface resistance of the walls of a building under normal conditions in this country are 0.75 hr./B.Th.U./sq. ft./°F. for internal surfaces and 0.25 hr. for external surfaces, but very different values may be found under exceptional conditions of exposure.

Air-to-air Resistance.

The sum of the resistances of the component layers of a structure and the surface resistances on each side of the structure will give the air-to-air resistance of the structure.

Air-to-air Thermal Transmission Coefficient.

The reciprocal of the air-to-air resistance of a structure will give the air-to-air thermal transmission coefficient of the structure.

Example of Method of Calculation of Air-to-air Transmission Coefficient.

On the basis of the above-mentioned figures for the surface resistances, and taking the conductivity of the bricks and plaster to be 6.67 and 3.33 B.Th.U./in./sq. ft./°F., respectively, the air-to-air thermal transmission coefficient for a wall of a building con-

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structed of 9-in. solid fletton brickwork with ¾-in. plaster on the inside would be :—

Brick.

Conductivity

6.67 B.Th.U./in./sq. ft./°F.

Resistivity

$\frac{1}{6.67}$ = 0.15 hr./B.Th.U./in./sq. ft./°F.

Resistance of a wall 0.15×9=1.35 hr./B.Th.U./sq. ft./°F. 9 in. thick.

Plaster.

Conductivity

3.33 B.Th.U./in./sq. ft./°F.

Resistivity

$\frac{1}{3.33}$ = 0.3hr./B.Th.U./in./ sq. ft./°F.

Resistance of ¾-in. thick plaster 0.3×¾=0.23 hr./B.Th.U./sq. ft./°F.

Adding the individual resistances will therefore give :—

Internal surface resistance	0.75	hr./B.ThU./sq. ft./°F.
Resistance of ¾-in. plaster	0.23	,,
Resistance of 9-in. plaster	1.35	,,
External surface resistance	0.25	,,
Total resistance	2.58	,,

or an air-to-air thermal transmission coefficient of :—

$\frac{1}{2.58}$ = 0.39 B.Th.U./sq. ft./°F. difference of air temperature.

The last stage of this calculation can be performed graphically by the use of a specially prepared alignment chart such as is shown in Fig. 1. In this chart provision is made for varying conditions of exposure.

In using it, a straight edge is laid across, joining a point representing the thermal resistance of the construction alone, on the left-hand scale, with the appropriate exposure for the worst conditions on the right-hand scale. The air-to-air transmission coefficient is read off on the middle scale.

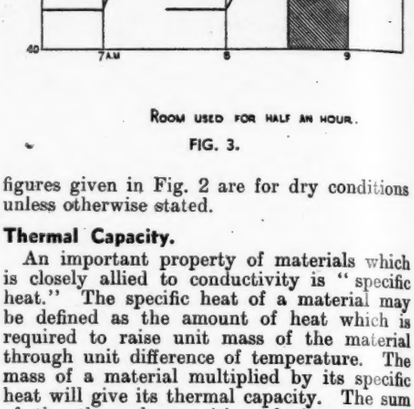
Insulation Values for Representative Materials.

Fig. 2 illustrates in graphical form the relative thermal insulating values for various building materials for unit thickness and also of specific thicknesses of these materials. The values indicated are thermal resistances derived as described above from laboratory measurements of thermal conductivity and conductance.

Effect of Air Cavities.

No account is taken in Fig. 2 of the effect of air cavities. An air space, particularly when it is sealed, provides one of the best ways of obtaining thermal insulation. It is omitted from the list, however, because the efficiency of an air space varies considerably, depending on its situation and surroundings; the only safe way is to consider each case separately. For instance, the thermal resistivity of a 2-in. air space with metal wall ties in a cavity wall is 0.20 hr./B.Th.U./sq. ft./°F. per inch thickness. This is much lower than the thermal resistivity of an air space between a wall and an interior lining which, when the lining is on wood studs and the air space is of a normal thickness, can be taken as 0.90 hr./B.Th.U./sq. ft./°F. per inch thickness.

It should be realised that the thermal insulation value of a structure may be much less when it is wet than when it is dry. The figures given in Fig. 2 are for dry conditions unless otherwise stated.



ROOM USED FOR HALF AN HOUR.

FIG. 3.

Thermal Capacity.

An important property of materials which is closely allied to conductivity is "specific heat." The specific heat of a material may be defined as the amount of heat which is required to raise unit mass of the material through unit difference of temperature. The mass of a material multiplied by its specific heat will give its thermal capacity. The sum of the thermal capacities of the materials which make up a structure will give the thermal capacity of the structure. The lower the thermal capacity of a structure, the more quickly will the temperature of the structure respond to fluctuations in the temperature of the environment; while the higher the thermal capacity of the structure the slower will be the response. This fact should be made use of in the design of buildings. An example is furnished by a room which is required for occupation during mealtimes only. An interesting experiment was made in a house some years ago. A small room with brick walls finished with plaster in the usual way was used for breakfast, and it was found necessary to turn on the gas-fire 1½ hours beforehand to warm the room sufficiently. The walls were subsequently panelled in wood, and the period required for heating-up was then reduced to half hour. The curves in Fig. 3 show rates of rise of temperature actually recorded before and after panelling. This result was achieved because the new lining was of lower thermal capacity and better thermal insulation than the bare wall. This is a case in which thermal insulation results in a distinct convenience by saving time as well as fuel costs.

(The thermal insulation values of certain common constructions, together with recommendations for the type of construction which should be adopted to provide good thermal insulation, will follow in Part II of this note.)

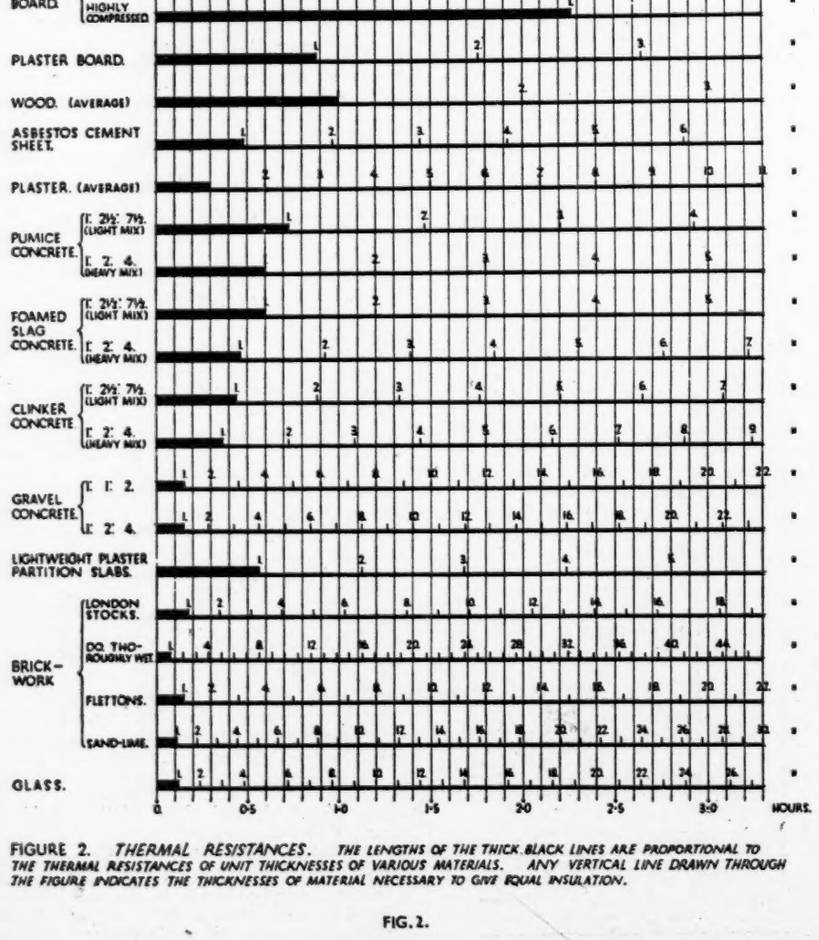


FIGURE 2. *THERMAL RESISTANCES. THE LENGTHS OF THE THICK BLACK LINES ARE PROPORTIONAL TO THE THERMAL RESISTANCES OF UNIT THICKNESSES OF VARIOUS MATERIALS. ANY VERTICAL LINE DRAWN THROUGH THE FIGURE INDICATES THE THICKNESSES OF MATERIAL NECESSARY TO GIVE EQUAL INSULATION.*

FIG. 2.

L.P.T.B. REPORT.

NEW WORKS AND IMPROVEMENTS.

According to the fifth annual report of the London Passenger Transport Board, in the last five years more than £22,000,000 have been spent on additions and improvements. The estimated further expenditure on capital account authorised June 30, 1938, amounts to £23,400,000. When the programme of new works and improvements has been completed, 17 miles of new railways with 11 new stations will have been added to the system of railways and 45 of the Board's existing stations will have been rebuilt. Connections will have been made with the suburban systems of the London and North-Eastern and the Great Western Railways. The Board have found by experience that improvements to existing stations attract more traffic. Mention is also made of the efforts which are being continued to reduce the noise caused by vehicles in the tube tunnels. At present some 6½ miles of tunnel have been fitted with noise-absorption equipment, and work will shortly commence on further sections. In addition, the experiment of welding lengths of rail together to eliminate joints has proved successful, and a special type of noise-reducing joint is also being used elsewhere. The report states that the volume and intensity of the noise have been markedly reduced.

RESTORATION WORK AT WESTMINSTER ABBEY

HIDDEN TREASURES REVEALED.

THE work of restoration and cleaning which goes on continuously at Westminster Abbey and the treasures revealed through that work were recently described by Mr. Lawrence E. Tanner, Keeper of the Muniments, at Kensington Town Hall, in a lantern lecture on "Recent Discoveries and Work at Westminster Abbey."

Mr. Tanner said that for over 600 years there was almost continuous building at Westminster. About 1520 the Abbey stood complete, and there was no further building until the towers were added 200 years later. The problem from 1540 had been to preserve and keep the fabric in repair.

Our modern knowledge of the Abbey was due primarily to three men—Dr. Armitage Robinson, Dr. E. J. L. Scott, and Professor W. R. Lethaby. The latter, by his great knowledge of French cathedrals, was able to show how English craftsmen "placed themselves under the most progressive influence of their day and imitated without reserve what was new and admirable in the great churches of France." By the thirteenth century French architects had invented the pointed arch and flying buttresses to take the weight, and they were working out these discoveries with a logic and audacity and with a perfection of proportion which had never been surpassed. Lethaby had no doubt that the Abbey was planned and conceived by an Englishman who had deeply studied and then adapted French ideas, and the result was triumphantly English!

The builders of the Abbey were Henry of Reynes, John of Gloucester, and Robert of Beverley, while Henry Yevele built the nave. The craftsmen were Odo, the goldsmith, Alexander, the carpenter, and John of St. Albans.

It was in 1930, when, as part of a great cleaning scheme, staging was erected across the transept, that it was possible to examine the censing angels, the work of supreme artists of the thirteenth century.

In 1936, in cleaning the south wall on the ground level, traces of colour were found, especially behind one of the monuments. The wall itself was a dingy brown, due mainly to dirt and the shellac preservative put on by Sir Gilbert Scott in the sixties. With infinite care this preservative and the dirt were removed and to their astonishment two magnificent wall paintings, 9 ft. high, slowly emerged —one of St. Christopher and the other of the Incredulity of St. Thomas.

In 1932 another great work was forced upon them by the falling of a stone from the roof of Henry VII's Chapel. It was found that the structure of the vault was perfectly sound, but that several stones had slipped and many joints were defective. After a difficult and intricate job had been completed and with the vaulting secure, the whole was cleaned and treated with a solution of refined lime, salt, and water. The result was astonishing, and those who had watched the progress of the work week by week had felt an ever-growing admiration for the old Tudor masons.

In the last 10 years there had been cleaned the south transept and aisle, the lantern, Henry VII's Chapel and side aisles, St. Faith's Chapel, St. Benedict's Chapel, St. Edmund's Chapel, and (so far only to triforium level) the apse at the east end. Beautiful as the dark colour of the Abbey was, it was in fact sheer dirt and grime, intensified by a preservative put on and over the dirt in the fifties and sixties. This was now being removed, and once again we began to see the Abbey in all its beauty and as its builders saw it.

The work of cleaning was laborious, involving the use of a vacuum cleaner, scrubbing with methylated spirits, and washing down with cold water. At first condensed milk was used to finish the work and give it a protective film, but such a film, however carefully applied, necessarily tended to blur the details, and it was felt that in a properly heated building such as the Abbey now was, and lit by electric light instead of gas, such a preservative was unnecessary.

Another delightful aspect of the work had been the careful cleaning of monuments, bringing out the colour which lay hidden beneath grime.

In a week or two the most recently cleaned chapel of St. Edmund would be reopened, and it would come as a revelation to many when they saw what had been done in the way of cleaning the tombs there.

SOCIETIES AND INSTITUTIONS

R.I.B.A.

Examinations for District Surveyor and Building Surveyor.

At the R.I.B.A. Statutory Examination for the Office of District Surveyor in London held on October 5, 6 and 7, 1938, two candidates presented themselves, and the following candidate was successful: Mr. Stanley J. Nunn.

At the R.I.B.A. Examination for the Office of Building Surveyor under Local Authorities held on October 5, 6 and 7, 1938, seven candidates presented themselves, and the following were successful: Messrs. C. W. Bucknall, E. T. Edwards, F. D. Entwisle, G. W. Gelson, B. G. Phillips, and Robert Pope.

Membership.

At a Council meeting of the Royal Institute of British Architects held on Monday, October 24, the following members were elected :—

AS HON. CORRESPONDING MEMBERS.

M. Fahmy (Cairo), A. Sartoris (Milan).

AS FELLOWS.

C. W. Box (London).
G. Checkley (Nottingham).
J. O. B. Hitch (London).
H. B. Mackenzie (London).
H. Greenwood (London).
W. M. Traylor (London).

OVERSEAS.

B. N. Weekes (Sydney, N.S.W.).

AS ASSOCIATES.

(Miss) B. M. Beatty (A.A.) (London).
D. T. Bellamy (A.A.) (London).
W. R. Bunning (London).
J. D. A. Carter (A.A.) (Dorchester).
J. M. Denney (Weymouth).
K. Easton (King's Coll. (Univ. of Durham), Newcastle-on-Tyne) (Richmond, Surrey).
H. S. Griffiths (A.A. (London).
A. F. Humphreys (Sch. of Arch. Vic. Univ., Manc.) (Stockport, Cheshire).
(Mrs.) C. M. Hutcheson (A.A.) (London).
R. W. Johnston, B.A. Cantab. (Sch. of Arch., Cam. Univ. and Sch. of Arch., Edin. Coll. of Art) (Edinburgh).
I. B. Kinnear, Dip. Arch. (Edin.) (Sch. of Arch., Edin. Coll. of Art) (Dundee).
D. L. McKee (Livpl. Sch. of Arch., Univ. of Livpl.) (Portsmouth).
A. H. Mack, B.Arch. (London).
J. A. McMorland, Dip. Arch. (Edin.) Sch. of Arch., Edin. Coll. of Art) (London).
S. Meyrick (Livpl. Sch. of Arch., Univ. of Livpl.) (Sheffield).
H. R. W. Orr (Bletchley, Bucks).
(Miss) A. W. R. Parker (A.A.) (London).
D. S. Pearce (A.A.) (London).
I. D. F. Picken (A.A.) (London).
G. P. F. Ruxton, B.A. (A.A.) (London).
P. F. Shepheard, B.Arch. Livpl. (Livpl. Sch. of Arch., Univ. of Livpl.) (London).
D. B. Shepherdson, B.Arch. (Sydney) (London).
I. B. Simpson (A.A.) (London).
W. F. Smith (London).
(Miss) M. Tall (Bartlett Sch. of Arch., Univ. of London) (London).
T. Verity (A.A.) (London).
J. K. Wearing (Bartlett Sch. of Arch., Univ. of London) (London).

OVERSEAS.

H. S. M. Carver (A.A.) (Ontario, Canada).
J. B. Collins, B.A.Arch. (Cape Town).
J. E. Egan (Cape Town).
L. A. Knox (Canberra, Australia).
K. M. Kotasthane (Bombay).
K. A. Parelkar (Bombay).
(Miss) M. M. Troup (Bartlett Sch. of Arch., Univ. of London) Pretoria, South Africa).
W. I. Willies (Durban).
T. H. Willington (Neutral Bay, N.S.W.).
G. M. Willis, Dip.Arch. (Cape Town) (Cape Town).
A. J. Zammit (Bartlett Sch. of Arch., Univ. of London) (Malta)

AS LICENTIATES.

T. A. L. Concannon (London).
J. Foster (Grimsby).
E. J. Harman, P.A.S.I. (London).
E. G. Membery (London).
W. E. Homer (Brierley Hill, Staffs.).
H. Jennings (Brierley Hill, Staffs.).
J. S. Tipper (London).
L. F. I. Wolters (London)

Problems in Design.

The list of Final Examination Alternative Problems in Design for the year ending December 31, 1939, have been published by the R.I.B.A. Copies of the list may be obtained free on application at the R.I.B.A. The problems included in the list are as follows: (*a*) A hotel in the Lake District; (*b*) Working Drawings for same—designs to be submitted by February 28. (*a*) A Technical School in a Provincial Town; (*b*) Working Drawings for same—designs to be submitted by April 28. (*a*) A Child Welfare Clinic; (*b*) Working Drawings for same—designs to be submitted by June 30. (*a*) A Youth Hostel; (*b*) Working Drawings of same—designs to be submitted by August 31. (*a*) Municipal Offices in a Small Town; (*b*) Working Drawings for same—designs to be submitted by October 31. (*a*) A Housing Scheme; (*b*) Working Drawings for same—designs to be submitted by December 29.

THE INSTITUTION OF STRUCTURAL ENGINEERS.

A.R.P. Committee's Report.

What will no doubt prove to be a valuable addition to the literature covering the subject of Air Raid Precautions is the publication recently issued by the Institution of Structural Engineers, being the Report of the Institution's Committee on A.R.P.

A foreword to the Report states that it was prepared by a committee appointed by the Council to consider the problems arising out of air raid precautions as affecting the structural engineer and his client, and the matter is viewed primarily from the engineer's point of view, though it has been impossible to ignore entirely other matters of general interest which necessarily obtrude into this point of view.

The Committee, which included Dr. Oscar Faber, O.B.E., D.C.L., D.Sc., etc. (chairman), the President of the Institution, Lieut.-Col. H. S. Rogers, C.M.G., D.S.O., and Messrs. R. V. Chate, W. Cyril Cocking, L. A. J. Dyke, D. H. Green, O.B.E., F. S. Snow and C. Roland Woods, M.B.E., at the outset intended making an exhaustive study of the problem and would have preferred to wait until many experiments and investigations had been completed. The foreword continues: "In the middle of its deliberations, however, the European crisis developed to such a pitch that it appeared to the Committee that the presentation of an immediate report might be of greater public service than a more exhaustive study presented at a much later date. For nearly two weeks the Committee had meetings almost daily, from which it will be appreciated how much time and energy was given by the members of the Committee at a time when their services were in great demand in other directions on urgent public works. It has been thought only right that the circumstances under which the report was prepared should be understood by those who may be disposed to criticise it in respect of matters in which, no doubt, some improvement could have been effected had there been more time available. For the same reasons it was decided to issue Parts I and II of the

report as an immediate publication of urgency, leaving Parts III and IV to a later issue."

Parts I and II.

The Parts I and II referred to in the foreword deal respectively with "A Digest of Published Information," including (*a*) The Weapons of Aerial Attack, (*b*) Resistance of Materials and Structures; and "The Committee's Recommendations for Protecting Existing Buildings," (*a*) Strength and strutting of floors against collapse. (*b*) Protection against blast and splinters. (*c*) Protection against incendiary bombs. (*d*) Protection against gas. (*e*) Protection against high explosive bombs. (*f*) Relative merits of different types of buildings, and (*g*) General recommendation. Part III will deal with "Air Raid Shelters," and Part IV with "New Buildings."

The foreword concludes: "The Committee also appreciate that further experience of bombing and air raid precautions may throw fresh light on some of these problems, and necessitate an early revision of the first edition. The Committee would appreciate any constructive criticism and will be pleased to receive any suggestions regarding the report for consideration when dealing with future editions."

Copies of the Report are obtainable from the Institution, 11, Upper Belgrave-street, London, S.W.1, price 1s., including postage.

BERKS, BUCKS AND OXON ARCHITECTURAL ASSOCIATION.

Annual Dinner.

"Now it begins to be understood that in many directions the architect is the country's natural planner, and we are prepared to demonstrate this immediately in planning our professional preparedness." Thus MR. H. S. GOODHART-RENDEL, P.R.I.B.A., when replying to the toast of "The Royal Institute of British Architects and its Allied Societies," on Thursday, October 20, at the Berks, Buck and Oxon Architectural Association's dinner at the Town Hall, Oxford.

Mr. Goodhart-Rendel had outlined the activities of the R.I.B.A. in connection with national defence and went on to say that had the times in which he spoke been less troublous he would have attracted attention to the danger that our planning activities should be liable to excessive materialism. Someone had said that the duty of an architect was to give a soul to inanimate matter, and architecture was an art in which latterly that high duty had been lost sight of.

The toast was proposed by MR. T. LAWRENCE DALE, F.R.I.B.A., who said that they had to understand the enormous importance of architecture to humanity, and the enormous benefits it could bestow. London, once lovely and charming, was now an incoherent mass of exploited vulgarity. There was no reason why Oxford should endeavour to cram great buildings into inadequate sites. Town planning was the great social need of the age.

Replying to the toast of "The City and the University," proposed by VISCOUNT CHETWYND, the Mayor of Oxford (COUNCILLOR H. S. ROGERS) said: "We are having to grapple in the City Council with this problem of immense modernity, and we are also trying to preserve our ancient treasures—though some architects may not believe us. . . . I do want you also to believe that there is a much greater sense of æsthetics in the City Council than there has been hitherto, and that there is another point of view besides that of £ s. d."

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE.

The Pass List of the Preliminary and Professional Examinations of the Auctioneers' and Estate Agents' Institute of the United Kingdom, 29, Lincoln's Inn Fields, W.C.2, has now been published. It is announced that the Council of the Institute has decided to make a number of changes in the examinations, and these will come into force in January, 1940. Full particulars of the changes in the lists of subjects, with the syllabus of each subject, will be obtainable on application to the Institute.

THE CONTRACTOR'S OBLIGATIONS AND LIABILITIES—IV

By W. T. CRESWELL, K.C., Hon.A.R.I.B.A., A.S.I., etc., assisted by NORMAN P. GREIG, B.A., Barrister-at-Law.

INSPECTION OF THE SITE.

IN building and engineering contracts for a lump-sum price, the contractor is bound to carry out to completion, and in a workmanlike manner, all the work contemplated by the contract, for the value of the structure depends entirely on its completion. The performance of a lump-sum contract, in other words, includes everything to complete the whole.

A very necessary proceeding, therefore, before tendering for such work is the inspection of the site upon which the structure is to be erected, and it is obvious that the time to take this step is after the receipt of the plans, specification and bills of quantities of the proposed work. It need only be mentioned here that the mere fact that a contractor has agreed in his contract to erect a structure implies that he understands the plans and specifications with which he has been supplied, and that he has examined the site and strata of the soil and checked the drawings, quantities and calculations.

The legal consequences that may ensue if he does not do these things make the matter more than one of mere expediency, for it must be borne in mind that neither an employer nor his architect or engineer or quantity surveyor, impliedly warrants the drawings or quantities; and in a number of actions at law arising out of building and engineering contracts it has been pointed out judicially that a particular legal consequence might have been avoided had the contractor taken the precaution now being considered.

It can be laid down as a general principle that where a contractor has entered into a contract to construct certain works, and it turns out that it is impossible of performance, he is not necessarily excused from the legal consequences of non-fulfilment of the contract, among which can be included damages for non-performance. Again, in the execution of a building or engineering contract, unforeseen or unexpected difficulties might arise (for example, such as may be due to the nature of the soil, presence of rock, etc.) which may cause delay in the completion of the works, and consequently bring into operation the penalty clause under the contract for delay in time of completion. Here it is possible, in many cases, that such consequences might have been avoided by an inspection of the site. Large obligations attach to a contractor who has undertaken work under a contract, and, as will shortly be shown, he may, in certain cases, have to take risks of a very serious nature. It would appear, however, that where serious obstacles not within the contemplation of the parties at the time of entering into the contract have supervened, and whose effect is to change materially the nature of the work and render the special terms of the contract inapplicable, the Court may grant relief to a contractor in an action brought against him by an employer, such relief being usually afforded by the award of nominal damages only.

It may again be mentioned that when an employer gives possession of the site under the terms of the contract, he gives no warranty to the contractor that the site is a good one, nor even that it is fit to build upon. The most that can be inferred is that the land comprising the site is at least reasonably fit for the particular structure that is to be erected upon it.

Let it be repeated, then, that a contractor should take reasonable means to inform himself, before entering upon a building or engineering contract, as to the practicability or otherwise of the project he is considering. It would be useless, as well as absurd, for any contractor to enter into a contract for works which he knows to be impracticable.

Defects in the Nature of the Soil.

A contractor is not excused from performance of his building or engineering contract owing to defects in the nature of the soil of the site, and non-performance would render him liable in damages. Thus, where a lump-sum contract had been entered into for the erection of a building and unexpected difficulties arose because of the nature of the soil in which the works were to be executed, and which caused considerable expenditure to deal with, it was held that, in the absence of any specific guarantee or definite representation as to the nature of the soil, the contractor, on completing the contract, was only entitled to the lump-sum price and nothing more by way of an "extra," and could not abandon the contract when he discovered the nature of the soil (Bottoms *v.* York Corporation (1892), 2 H.B.C., 4th edition, 208, C.A.). In a case such as the above it appears that it would be no defence in an action for damages to plead that, so far as the building had been erected, it was constructed in accordance with the plans and specifications, for, as already stated, neither the employer nor the architect impliedly warrants that the contract works can be executed in accordance with the plans and specifications; consequently, where there is no express warranty given, the contractor has, in general, no remedy should the plans and specifications prove unworkable.

In Thorn *v.* London Corporation (1876), 1 A.C. 120, a case in which a contractor had completed the contract, involving a considerable expenditure for extra work, owing to the plans being found unworkable and the subject of the contract (the erection of a bridge) having to be built in an entirely different manner, the following important dictum was laid down by Lord Chelmsford: "The builder, before he made his tender, ought to have informed himself of all the particulars connected with the work, and especially as to the practicability of executing every part of the work contained in the specification."

In another case a contractor entered into a contract to construct certain works on the sea-shore, namely, a sea-wall, in the course of which damage was caused to the site by the action of wind and sea. It was held, in an action by the contractor, that in such a contract it is the contractor and not the employer who takes the risks of interference with the work by the action of sea and wind, which, in the ordinary contemplation of everyone, are risks incidental to the performance of the contract. There is no implied contract by the employers that the sea-shore shall remain in the same condition at the end as it was at the beginning of the contract (Jackson *v.* Eastbourne Local Board (1886), 2 H.B.C., 4th ed., 81, H.L.). A further matter, closely connected with those discussed above, can be illustrated by the Tharsis Sulphur, etc., Co., *v.* M'Elroy Case (1878), 3 A.C. 1040. Here, in the course of the contract work, the contractors found it impossible to use girders of the specified weight and were permitted to erect others, for the additional cost of which they afterwards claimed. Said Lord Blackburn (at p. 1050): "When, as in this case, the contractors say, 'We cannot do the work as we have promised to do it unless you permit us to make it (*i.e.*, the girder) thicker than we undertook to make it,' and the engineer on behalf of the company says, 'I will not object to your making it thicker if you cannot do it otherwise,' I think there is nothing in that to imply that there was to be payment for that additional thickness."

(*To be continued.*)

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We do not undertake to reply to inquiries concerning proprietary materials.—ED.

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SIR,—In the instalment of London Building By-laws in your issue of October 21, no mention was made of inserting an intercepting trap between a private drain and the public sewer. I believe that to omit this trap is accepted as good practice to-day. Am I correct? G. G. E.

Wasps Under Floor.

SIR,—About two years ago I built a house, and the present owner complains that wasps have built a nest under the floor; one can see them swarming in and out of one particular air-brick. The whole of the floor is covered with T. and G. oak flooring, secret nailed. Can you please inform me whether, if I took up a portion of the oak flooring near to the entrance, it is usual to find the nest close by, or would the wasps be likely to travel some distance under the floor between the honeycombed sleeper walls?

I understand that some one has sprayed some mixture through the air-brick, but it had no effect apart from causing a nasty smell, which hung about in the rooms for a considerable time. H. P.

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SIR,—I have been asked to recommend a wall treatment for a small domestic kitchen about 12 ft. square, containing the usual sink, gas stove, kitchenette, etc. The walls are at present of brick, finished with some form of enamel paint, which quickly becomes greasy and dirty, particularly on the mortar joints. The owner has suggested glass wall tiling, but I feel that trouble might be experienced from condensation, and that a matt surfaced tile would be more suitable. Price is not the first consideration, the main purpose of the scheme being to eliminate cleaning, etc. E. T.

Treatment of Walls Before Papering.

SIR,—It is my wish to carry out the decorations in wallpaper in place of the usual distemper work in a house which will shortly be completed. As the moisture from the plaster usually strikes through the wallpaper in the case where a house is decorated immediately after completion, I wonder if you could assist by giving me particulars of any treatment to walls by which this could be avoided. H. S.

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[ANSWERS TO "G. C.," OCTOBER 28.]

SIR,—Querist raises an interesting point as to a matter which has come before me in districts where the omission of the intercepting trap has been encouraged for many years prior to the revised model by-laws. In my view the practice has much to be said for it in entirely new districts where all traps are omitted, as it ensures a thorough and diffused ventilation of the main sewer, so that each house vent-pipe carries very little sewer gas. In districts where about 90 per cent. of the house-drains are old and trapped, a system which forces the new 10 per cent. to carry the ventilating system of the sewer seems open to question, and on the points mentioned by your correspondent.

Medical opinion as to the dangers of sewer gas and sewer gas has become somewhat modified, however, and the risks to health are slight in all cases which do not involve actual physical contact with pollution. A sewerage authority should take great care, however, in positions where the fall of the sewer throws heavy pressure on the upper end, to see that the sewer is ventilated with an adequate number of private vent-pipes, or to add additional vents where this is not the case. DRAINS.

SIR,—The reason for the requirement of the provision of an intercepting trap being omitted from the Model By-laws is mainly that of the conflict of opinion as to the necessity and usefulness of intercepting traps. The same views put forward by "G. G." and others in support of the provision of an intercepting trap, as also the views of a like number against its provision, were reported upon by a Departmental Committee in 1912, and the conclusions reached were all against the enforcement of their provision.

Among other things, it was thought that their omission meant the simplification of the construction of house-drainage, whereas their inclusion meant the liability of a trap being blocked, and the consequent putrefaction of sewage before reaching the sewer. Some 5,600 traps were examined, and 23 per cent. of these were found to be blocked. It was admitted that the insertion of a trap is an effectual barrier to the entry of sewer gas, etc., into the house-drain, but that this might be overcome even without a trap if the house-drain was properly constructed. Also, if properly trapped fitments and modern standards of plumbing are used, the trap is found to be unnecessary. The necessity for a trap has not been established on bacteriological or epidemiological grounds. LEX.

What is "Constant Hot Water?"

[ANSWERS TO "H. C.," OCTOBER 28.]

SIR,—It has not been decided by the Court what "constant hot water" is, though the Court has decided other like matters which would assist "H. C." if he seeks redress or is faced with an action for breach of his contract should he elect to leave the flat. The landlord is not likely to release him.

He should call upon his landlord to remedy the defects complained of if, as appears, he is not getting what he bargained for.

If compelled to take any action for specific performance of the agreement, he should not vacate the flat, but should first take legal advice as to his rights. He would probably succeed in obtaining damages if his landlord could not secure to him the "constant hot water," for the condition thereon is in the nature of a warranty of which there has been a breach. LEX.

SIR,—It seems that the accommodation is held under lease or agreement, and in such a case, unless the hot-water supply is mentioned in the agreement or the landlord agrees to do repairs, it would be difficult to enforce. In most cases the hot-water system comes under the tenant or tenants, and agreements provide for them to do the necessary cleaning, etc. If it could be proved that a constant supply of hot water was promised before taking the house, an interview with the landlord should make him remedy matters. Failing this, a solicitor should be consulted, as in my experience of this sort of case most depends on the nature of the contract. There is to my knowledge no legal definition of hot water. The landlord could be forced to remedy the hot water, but not be forced to break the contract. W. E. W.

Artificial Drying-out of Buildings.

[ANSWERS TO "P. S.," OCTOBER 28.]

SIR,—Artificial drying-out will hasten the evaporation of building water, but will not hasten the working out of the alkali from the lime products. The latter is assisted by slow and natural evaporation, and in the ordinary way any attempt to dry out by artificial means, other than good ventilation, is likely to involve subsequent cracking of plaster and flaking of decorations. FRESH AIR.

SIR,—In connection with some half-dozen banks which I have supervised the architects always specify that the vaults shall be artificially dried out. A p.c. is quoted and a special drying company carry out the work, but of course, one must remember that the shrinkage in vaults made entirely of blue bricks, concrete and steel is negligible. If one dried out a building by intensive heating, the shrinkage would take place in a more intensified form than by the normal way, without nearly so much damage and cost in replacing damage done. G. W. H.

Finishes for Oak.

[ANSWERS TO "B. H. B.," OCTOBER 28.]

SIR,—One method is to apply a strong solution of common washing soda or ammonia solution to the wood with a sponge or flat brush. The desired weathered effect can be obtained by varying the number of coats. Another method is to subject the oak to strong ammoniacal fumes, such as enclosing the oak in an airtight cupboard for a time with an open tray of liquid ammonia. With regard to the wax matt finish, first treat the oak with button polish (a variety of shellac-varnish), which fills up the grain and prepares a good, hard surface for waxing. Use either a good proprietary wax, or beeswax and turpentine (a better finish can be obtained with fine white wax than with ordinary yellow wax). It is a good plan to place the wax in the centre of a muslin cloth and rub the oak thoroughly. Hard, dry rubbing with energetic application is equally as important as the wax and turpentine mixture. Use a soft cloth when polishing, first across the grain and then with it. A second coating of wax and polishing should be given to produce a very hard finish which will not readily mark or show dirt. A. J. T. E.

SIR,—"Weathered" obviously means discoloured. Does querist desire that result? If so, bleach with caustic soda or liquid ammonia, sometimes called "fuming." In the case of waxed matt finish, the work is prepared much on the lines for french polishing and finally finished with beeswax. For a permanent effect I should french-polish and, finally, give a coat of flat oil varnish. This will not mark or show dirt. G. W. H.

"Provisional" Work.

[ANSWERS TO "E. S. G.," OCTOBER 14.]

SIR,—Querist in this case intimated that "all work up to ground-floor level" was described as "Provisional." Such a description comprises definite work as excavation, concrete, brickwork, dampcourses, etc., which of necessity has to be done; it also comprises an indefinite work in the nature of planking and strutting, which is left to the discretion of the builder whether he does it, or by not doing it takes the risk of earth falls. Whether done or not, custom provides that the builder shall be paid. Querist does not state if the architect gave an order for planking and strutting to be omitted, and it is reasonable to assume no such order was given, that drawings were supplied showing the work required, and that the builder did the work in a normal way, and by not planking took the risk. Apparently planking and strutting was not itself particularised as provisional, but appeared as such under a general heading with other work. Some surveyors state that planking is provisional, and then further indicate that only the amount actually done will be paid for. Is it to be assumed, then, that if in a trench 50 ft. long and 10 ft. deep, one plank 6 in. wide on either side and strutted between is put, the builder will be paid for only 50 ft. super. instead of 1,000 ft.? If so, it is an absurdity. The S.M.M., in stating that planking and strutting shall be measured, gives a definite instruction which is somewhat more than a requirement. R. A. C.

In answer to the foregoing, "Lex" writes as follows:—

"I have nothing to say as to 'R. A. C.'s' contentions, for, as far as they go, he is right; but, like others, he misses the point, which is that there is no custom that payment shall be made for any work taken provisionally and which is not in fact executed.

"An item taken provisionally does not follow the rule or custom which obtains in respect to items part of a lump sum contract, viz., that you get paid for the item whether you do it or not."

report as an immediate publication of urgency, leaving Parts III and IV to a later issue."

Parts I and II.

The Parts I and II referred to in the foreword deal respectively with "A Digest of Published Information," including (*a*) The Weapons of Aerial Attack, (*b*) Resistance of Materials and Structures; and "The Committee's Recommendations for Protecting Existing Buildings," (*a*) Strength and strutting of floors against collapse. (*b*) Protection against blast and splinters. (*c*) Protection against incendiary bombs. (*d*) Protection against gas. (*e*)Protection against high explosive bombs. (*f*) Relative merits of different types of buildings, and (*g*) General recommendation. Part III will deal with "Air Raid Shelters," and Part IV with "New Buildings."

The foreword concludes: "The Committee also appreciate that further experience of bombing and air raid precautions may throw fresh light on some of these problems, and necessitate an early revision of the first edition. The Committee would appreciate any constructive criticism and will be pleased to receive any suggestions regarding the report for consideration when dealing with future editions."

Copies of the Report are obtainable from the Institution, 11, Upper Belgrave-street, London, S.W.1, price 1s., including postage.

BERKS, BUCKS AND OXON ARCHITECTURAL ASSOCIATION.

Annual Dinner.

"Now it begins to be understood that in many directions the architect is the country's natural planner, and we are prepared to demonstrate this immediately in planning our professional preparedness." Thus MR. H. S. GOODHART-RENDEL, P.R.I.B.A., when replying to the toast of "The Royal Institute of British Architects and its Allied Societies," on Thursday, October 20, at the Berks, Buck and Oxon Architectural Association's dinner at the Town Hall, Oxford.

Mr. Goodhart-Rendel had outlined the activities of the R.I.B.A. in connection with national defence and went on to say that had the times in which he spoke been less troublous he would have attracted attention to the danger that our planning activities should be liable to excessive materialism. Someone had said that the duty of an architect was to give a soul to inanimate matter, and architecture was an art in which latterly that high duty had been lost sight of.

The toast was proposed by MR. T. LAWRENCE DALE, F.R.I.B.A., who said that they had to understand the enormous importance of architecture to humanity, and the enormous benefits it could bestow. London, once lovely and charming, was now an incoherent mass of exploited vulgarity. There was no reason why Oxford should endeavour to cram great buildings into inadequate sites. Town planning was the great social need of the age.

Replying to the toast of "The City and the University," proposed by VISCOUNT CHETWYND, the Mayor of Oxford (COUNCILLOR H. S. ROGERS) said: "We are having to grapple in the City Council with this problem of immense modernity, and we are also trying to preserve our ancient treasures—though some architects may not believe us. . . . I do want you also to believe that there is a much greater sense of æsthetics in the City Council than there has been hitherto, and that there is another point of view besides that of £ s. d."

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE.

The Pass List of the Preliminary and Professional Examinations of the Auctioneers' and Estate Agents' Institute of the United Kingdom, 29, Lincoln's Inn Fields, W.C.2, has now been published. It is announced that the Council of the Institute has decided to make a number of changes in the examinations, and these will come into force in January, 1940. Full particulars of the changes in the lists of subjects, with the syllabus of each subject, will be obtainable on application to the Institute.

THE CONTRACTOR'S OBLIGATIONS AND LIABILITIES—IV

By W. T. CRESWELL, K.C., Hon.A.R.I.B.A., A.S.I., etc., assisted by NORMAN P. GREIG, B.A., Barrister-at-Law.

INSPECTION OF THE SITE.

IN building and engineering contracts for a lump-sum price, the contractor is bound to carry out to completion, and in a workmanlike manner, all the work contemplated by the contract, for the value of the structure depends entirely on its completion. The performance of a lump-sum contract, in other words, includes everything to complete the whole.

A very necessary proceeding, therefore, before tendering for such work is the inspection of the site upon which the structure is to be erected, and it is obvious that the time to take this step is after the receipt of the plans, specification and bills of quantities of the proposed work. It need only be mentioned here that the mere fact that a contractor has agreed in his contract to erect a structure implies that he understands the plans and specifications with which he has been supplied, and that he has examined the site and strata of the soil and checked the drawings, quantities and calculations.

The legal consequences that may ensue if he does not do these things make the matter more than one of mere expediency, for it must be borne in mind that neither an employer nor his architect or engineer or quantity surveyor, impliedly warrants the drawings or quantities; and in a number of actions at law arising out of building and engineering contracts it has been pointed out judicially that a particular legal consequence might have been avoided had the contractor taken the precaution now being considered.

It can be laid down as a general principle that where a contractor has entered into a contract to construct certain works, and it turns out that it is impossible of performance, he is not necessarily excused from the legal consequences of non-fulfilment of the contract, among which can be included damages for non-performance. Again, in the execution of a building or engineering contract, unforeseen or unexpected difficulties might arise (for example, such as may be due to the nature of the soil, presence of rock, etc.) which may cause delay in the completion of the works, and consequently bring into operation the penalty clause under the contract for delay in time of completion. Here it is possible, in many cases, that such consequences might have been avoided by an inspection of the site. Large obligations attach to a contractor who has undertaken work under a contract, and, as will shortly be shown, he may, in certain cases, have to take risks of a very serious nature. It would appear, however, that where serious obstacles not within the contemplation of the parties at the time of entering into the contract have supervened, and whose effect is to change materially the nature of the work and render the special terms of the contract inapplicable, the Court may grant relief to a contractor in an action brought against him by an employer, such relief being usually afforded by the award of nominal damages only.

It may again be mentioned that when an employer gives possession of the site under the terms of the contract, he gives no warranty to the contractor that the site is a good one, nor even that it is fit to build upon. The most that can be inferred is that the land comprising the site is at least reasonably fit for the particular structure that is to be erected upon it.

Let it be repeated, then, that a contractor should take reasonable means to inform himself, before entering upon a building or engineering contract, as to the practicability or otherwise of the project he is considering. It would be useless, as well as absurd, for any contractor to enter into a contract for works which he knows to be impracticable.

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A contractor is not excused from performance of his building or engineering contract owing to defects in the nature of the soil of the site, and non-performance would render him liable in damages. Thus, where a lump-sum contract had been entered into for the erection of a building and unexpected difficulties arose because of the nature of the soil in which the works were to be executed, and which caused considerable expenditure to deal with, it was held that, in the absence of any specific guarantee or definite representation as to the nature of the soil, the contractor, on completing the contract, was only entitled to the lump-sum price and nothing more by way of an "extra," and could not abandon the contract when he discovered the nature of the soil (Bottoms *v.* York Corporation (1892), 2 H.B.C., 4th edition, 208, C.A.). In a case such as the above it appears that it would be no defence in an action for damages to plead that, so far as the building had been erected, it was constructed in accordance with the plans and specifications, for, as already stated, neither the employer nor the architect impliedly warrants that the contract works can be executed in accordance with the plans and specifications; consequently, where there is no express warranty given, the contractor has, in general, no remedy should the plans and specifications prove unworkable.

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[ANSWERS TO "B. H. B.," OCTOBER 28.]

SIR,—One method is to apply a strong solution of common washing soda or ammonia solution to the wood with a sponge or flat brush. The desired weathered effect can be obtained by varying the number of coats. Another method is to subject the oak to strong ammoniacal fumes, such as enclosing the oak in an airtight cupboard for a time with an open tray of liquid ammonia. With regard to the wax matt finish, first treat the oak with button polish (a variety of shellac-varnish), which fills up the grain and prepares a good, hard surface for waxing. Use either a good proprietary wax, or beeswax and turpentine (a better finish can be obtained with fine white wax than with ordinary yellow wax). It is a good plan to place the wax in the centre of a muslin cloth and rub the oak thoroughly. Hard, dry rubbing with energetic application is equally as important as the wax and turpentine mixture. Use a soft cloth when polishing, first across the grain and then with it. A second coating of wax and polishing should be given to produce a very hard finish which will not readily mark or show dirt. A. J. T. E.

SIR,—"Weathered" obviously means discoloured. Does querist desire that result? If so, bleach with caustic soda or liquid ammonia, sometimes called "fuming." In the case of waxed matt finish, the work is prepared much on the lines for french polishing and finally finished with beeswax. For a permanent effect I should french-polish and, finally, give a coat of flat oil varnish. This will not mark or show dirt. G. W. H.

"Provisional" Work.

[ANSWERS TO "E. S. G.," OCTOBER 14.]

SIR,—Querist in this case intimated that "all work up to ground-floor level" was described as "Provisional." Such a description comprises definite work as excavation, concrete, brickwork, dampcourses, etc., which of necessity has to be done; it also comprises an indefinite work in the nature of planking and strutting, which is left to the discretion of the builder whether he does it, or by not doing it takes the risk of earth falls. Whether done or not, custom provides that the builder shall be paid. Querist does not state if the architect gave an order for planking and strutting to be omitted, and it is reasonable to assume no such order was given, that drawings were supplied showing the work required, and that the builder did the work in a normal way, and by not planking took the risk. Apparently planking and strutting was not itself particularised as provisional, but appeared as such under a general heading with other work. Some surveyors state that planking is provisional, and then further indicate that only the amount actually done will be paid for. Is it to be assumed, then, that if in a trench 50 ft. long and 10 ft. deep, one plank 6 in. wide on either side and strutted between is put, the builder will be paid for only 50 ft. super. instead of 1,000 ft.? If so, it is an absurdity. The S.M.M., in stating that planking and strutting shall be measured, gives a definite instruction which is somewhat more than a requirement. R. A. C.

In answer to the foregoing, "Lex" writes as follows:—

"I have nothing to say as to 'R. A. C.'s' contentions, for, as far as they go, he is right, but, like others, he misses the point, which is that there is no custom that payment shall be made for any work taken provisionally and which is not in fact executed.

"An item taken provisionally does not follow the rule or custom which obtains in respect to items part of a lump sum contract, viz., that you get paid for the item whether you do it or not."

NEW BUILDINGS IN LONDON

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Where business representatives cannot be seen personally at this stage, this should be mentioned. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Wednesday morning.

ACTON.—HOUSES.—The B.C. has approved the appointment of Mr. E. W. Armstrong, F.R.I.B.A., 19, Hobart-place, S.W.1. as architect for the housing scheme at The Vale, W.3, the total cost of which is estimated at £250,000. The quantities are to be prepared by Messrs. John Leaning and Son, 28, John-street, W.C.1.

BARKING. — SHOPS. — The T.C. has appointed Messrs. Gardiner and Theobald, 96, Gower-street, W.C.1, as quantity surveyors for the 7 new shops in Axe-street, Heath-street and St. Paul's-road.

BARKING.—BUILDING.—The T.C. are inviting tenders for gymnasia and dining centres at Eastbury and Erkenwald schools. The Borough Architect is Mr. C. C. Shaw, B.Arch. (Liverpool), A.R.I.B.A.

BARKING. — LIBRARY. — The T.C. has accepted the tender of the Works Manager, amounting to £7,543, for the erection of the new branch library at the junction of Markvate and Neasham-roads. The plans are by Mr. C. C. Shaw, B.Arch. (Liverpool), A.R.I.B.A., Borough Architect.

BECKENHAM.—HOUSES.—The T.C. has accepted the tender of Messrs. Horace Newby, Ltd., 125, Burnt Ash-road, S.E.12, at £15,377 8s. 4d., for 34 council houses on the Crabbs Croft Estate, West Wickham.

BERMONDSEY. — PREMISES. — Messrs. Taylor, Walker and Co., Ltd., brewers, Limehouse, E.14, are to erect the new "Ship" public-house at the corner of St. Marychurch-street and Elephant-lane.

BERMONDSEY. — BUILDING. — The B.C. has approved the proposals for the adaptation of the St. Olave's Institute and the work to be carried out at £4,098 by the General Manager of the Works Department. Sketch plans for 53 flats and 1 shop in blocks Nos. 1 and 2 on the Enid-street area have been approved, and the estimate of the General Manager, at £29,374, accepted.

BERMONDSEY.—OFFICES.—Messrs. Newman and Newman, St. Thomas-chambers, Railway-approach, S.E.1, are the architects for the erection on a site adjoining Devon Mansions, Parish-street, of offices. No contracts placed.

BLACKHEATH. — EXTENSIONS. — No contracts yet placed for additions and extensions to All Saints' C.E. School, Blackheath Vale. Mr. J. E. K. Harrison, A.R.I.B.A., 7, Carteret-street, S.W.1, is the architect.

BROCKLEY.—GARAGE.—Mr. W. A. Hayward, motor engineer, is to make large extensions to his garage premises in Brockley-road, S.E. Plans by Mr. J. L. Bird, Arabin-road, Brockley, S.E. No contracts placed.

BROMLEY.—CLUB.—The Lewisham B.C. has approved plans for Mr. A. H. Taylor for club building on the west side of Old Bromley-road.

CATFORD.—PETROL STATION.—Mr. Bernard Chalk, L.R.I.B.A., 24, Coleman-street, E.C.2, is the architect for a garage and petrol station to be erected at 13-19, Rushey Green. Messrs. Wm. Mills and Sons, Woolwich-road, S.E.10, are the contractors.

CATFORD.—HOUSES, ETC.—Messrs. Wates, Ltd., 1258, London-road, Norbury, are erecting 45 houses in Conisborough-crescent, maisonettes in Whitefoot-lane, Hall Park estate and Catford Park estate.

CATFORD. — ALTERATIONS. — The National Provincial Bank, Ltd., 15, Bishopsgate, E.C2, are to rebuild front and make alterations to 133, Rushey Green.

CLAPHAM.—REBUILDING.—Mr. W. G. Ingram, 4, Verulam-buildings, Gray's Inn, W.C.1, is the architect for the rebuilding of the "Perseverence" beer-house in Nelson's-row. The building contract has been placed with Messrs. H. V. Clogg, Ltd., 159, Hanbury-street, E.1.

CLERKENWELL.—EXTENSION. — Messrs. Bovril, Ltd., 152, Old-street, E.C.1, have under consideration the extension of their warehouse and factory in Banner-street, E.C.1. Plans by Messrs. Lanchester and Lodge, FF.R.I.B.A., 19, Bedford-square, W.C.1. No contracts let.

COLINDALE.—EXTENSION.—Messrs. Duple Bodies and Motors, Ltd., are to make further extensions to their factory at Edgware-road, N.W.9. The architect is Mr. Dudley G. Marsh, L.R.I.B.A., Jessel-chambers, Chancery-lane, W.C.2. No contracts let.

CROYDON.—SHOPS.—Messrs. Whitbreads, Ltd., have agreed to take a lease of a piece of land in the rear of the "Eagle" public-house, having a frontage to Tamworth-road and Anne's-place, where it is proposed to erect three shops with living accommodation.

DAGENHAM.—HEADQUARTERS.—The British Legion, Dagenham Branch, have submitted plans to the U.D.C. for new headquarters on the east side of Rectory-road.

DARTFORD. — ALTERATIONS. — Messrs. Courage and Co., Anchor Brewhouse, S.E.1, are to make alterations to the "Greyhound" public-house, at Sutton-at-Hone. Mr. F. M. Kirby, F.R.I.B.A., is the company's architect.

DARTFORD. — REBUILDING. — Of the "Plough" Inn, Lowfield-street, is proposed by the Dartford Brewery Co., Ltd., Medway Brewery, Maidstone. Plans have been prepared by the company's architect, Mr. P. Searles, L.R.I.B.A. No contracts placed.

EAST DULWICH. — EXTENSIONS. — The governors of the James Allen's Girls' School have sanctioned extensions to accommodate 480 girls at £73,000 in East Dulwich-grove, S.E. The contract has been placed with Messrs. L. and W. Whitehead, Ltd., 169, Clapham-road, Stockwell, S.W.9. The plans have been prepared by Mr. J. E. Kenneth Harrison, A.R.I.B.A., 7, Carteret-street, S.W.1. The quantity surveyors are Messrs. L. A. Francis and Son, Vernon House, Sicilian-avenue, W.C.1.

EGHAM.—BUILDING.—H.M.O.W. are inviting tenders for erection of Egham telephone repeater station.

ELTHAM. — HOUSES.—Mr. A. J. Butcher, Express Mansions, Edgware, has prepared further plans on behalf of Messrs. G. H. Builders, Ltd., 21, Portland-place, W.1, for 18 houses and garages, Anstridge-road; 42 houses and garages, Restons-crescent; 12 houses and garages, Alderwood-road, Avery Hill estate.

ELTHAM.—HOUSES.—Messrs. Wates, Ltd., 1258-1260, London-road, Norbury, are to erect 45 houses on the north-east side of Sparrows-lane, New Eltham.

FARRINGDON-ROAD.—REMODELLING. — Of the "Clerkenwell Tavern" public-house, No. 106, is contemplated by Messrs. Watney, Combe, Reid and Co., Ltd., Stag Brewery, S.W.1, at £2,800. The company's architect is Mr. A. W. Blomfield, F.R.I.B.A. No contracts placed.

FELTHAM.—SHOPS.—And flats are to be erected shortly by the Building Department of the House Property and Investment Co., Ltd., 3, St. Bride's-street, E.C.4. Plans have been prepared by Mr. John P. Briggs, F.R.I.B.A., Effingham House, Arundel-street, W.C.2.

FINSBURY.—ALTERATIONS.—And additions are to be made to the drill hall and headquarters at 24, Sun-street, E.C.2, of the City of London Territorial Army and Air Force Association. Plans by Messrs. Gordon Stanham, 26, Bush-lane, E.C.4.

GOLDERS GREEN.—FLATS.—Messrs. Abgo Properties, Ltd., propose a block of 12 flats and 8 lock-up garages at the corner of Finchley-road and Addison-way, N.W.11. The architect is Mr. Peter H. Caspari, 102, Baker-street, W.1. No contracts placed.

GREEK-STREET.—PREMISES.—St. Mary's Wharf, Ltd., Cottenham-road-yard, N.19, are demolishing the premises of the site of No. 55. Messrs. Nicholas and Dixon Spain, 19, Hanover-square, W.1. are the architects, for the new premises. No contracts placed.

HALLAM-STREET.—OFFICES.—Plans for a block of offices have been prepared by Messrs. Marshall and Tweedy, FF.R.I.B.A., of 96, New Cavendish-street, W.1. The quantity surveyors are Messrs. Gleed, of 106, Regent-street, W.1.

HAMPSTEAD.—ALTERATIONS.—Mr. J. W. Hammond, 20, North-street, Romford, is the architect for alterations at "The Bull and Bush" public-house, North End-road, and not as stated in our last issue. Mr. W. M. Glendinning, 915, Finchley-road, Golders Green, N.W.11, is the contractor.

HESTON.—FACTORY.—Messrs. E. Plaistowe and Sons, South-road, Southall, are erecting a factory in Worton-road.

HORNCHURCH. — ESTATE. — Plans have been prepared by Messrs. Charles Living and Son, 75, The Grove, Stratford, E.15, for the development of the Mill estate, St. Mary's-lane, for residential purposes. No contracts placed.

HOUNSLOW.—PREMISES.—Messrs. Roper, Son and Chapman, 162, High-street, Hounslow, are the architects for new printing works, at the rear of the High-street.

KENTON.—PREMISES. — Messrs. Courage and Co., Ltd., are having licensed premises erected in Windermere-avenue, at the junction with Windermere-grove. Mr. F. M. Kirby, F.R.I.B.A., is the company's architect. The building contract has been placed with Messrs. J. Dorey and Co., Ltd., builders, Brentford.

LEE.—REBUILDING.—The Express Dairy Co., Ltd., Tavistock-place, W.C.1, are to partially rebuild and redrain their premises, in Burnt Ash-road. No contracts placed.

LEWISHAM. — SHOPS.—Mr. A. Frampton, Bromley Hill Estate Office, Bromley, is erecting 47 shops and flats over on the south side of Southend-lane.

LEYTONSTONE. — ALTERATIONS. — Mr. Donald Hamilton, 356, Oxford-street, W.1, is the architect for alterations at 686-690, High-road. No contracts placed.

LEYTONSTONE. — EXTENSIONS. — The London Co-operative Society, Ltd., 54, Maryland-street, Stratford, are making extensions to 857-861, High-road, from plans prepared by their own architect. The work is being carried out by the Society's own building department.

MERTON.—MAISONETTES.—Messrs. Harold Baily and Farrier, 92, Victoria-street, S.W.1, are the architects for maisonettes and garages on land at Blue House Farm, West Barnes-lane. No contracts placed.

MERTON.—FLATS.—Mr. E. D. Mills, A.R.I.B.A., 112, Chandos House, Palmer-street, S.W.1, is the architect for flats and maisonettes on land in Bishopsford-road. No contracts placed.

MITCHAM.—WAREHOUSE.—The Mitcham Fibre Mills, Ltd., have had plans prepared for a warehouse at their Grove mills, London-road. The contractors are Messrs. Charles Sayers and Son (Mitcham), Ltd., 335, London-road, Mitcham.

MITCHAM.—HOUSES.—The T.C. has accepted the tender of Messrs. W. H. Neale, Ltd., 2-4, The Drive, Blendon, Bexley, at £7 921, for 18 houses on the Gorringe Park estate. The housing architect is Mr. R. M. Chart, F.S.I., Lower Green, Mitcham.

PLUMSTEAD. — MAISONETTES.—Mr. F. T. Read, 24a, Mays Hill-road, Shortlands, has submitted plans to the Woolwich B.C. for five blocks of maisonettes and one bungalow on the Heathfield estate, Swingate-lane.

POPLAR.—REBUILDING.—Messrs. Montague Burton, Ltd., Hudson-road Mills, Leeds, 9, are rebuilding premises at the corner of East India Dock-road and Chrisp-street.

POPLAR.—REBUILDING.—Mr. S. A. S. Yeo, 56, Turnmill-street, E.C.1, is the architect for the rebuilding of "The Beehive" public-house, Empson-street, E.3. No contracts placed.

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PUTNEY. — EXTENSION. — Messrs. Young and Co.'s Brewery, Ltd., Ram Brewery, Wandsworth, S.W.18, are to extend the "Half Moon" public-house in Lower Richmond-road, S.W.15. Plans have been prepared by Messrs. John S. Quilter and Son, 81, Piccadilly, W.1, and a contract placed with Messes. Hall Beddall and Co., Ltd., Pitfield Wharf, Waterloo Bridge, S.E.1.

ST. PANCRAS.—PREMISES.—An application has been made to the B.C. on behalf of Messrs. F. Braby and Co., Ltd., 352, Euston-road, N.W.1. for the closing of a portion of Fitzroy-place, in connection with a new building to be erected by the company on a vacant site on the south side of Longford-street.

ST. PAUL'S CRAY.—EXTENSIONS.—Are to be made to the paper mills and warehouses, Main-street, of Messrs. W. Nash, Ltd. Plans by Mr. Douglas T. McIvor, 8, Old-road East, Gravesend.

SIDCUP.—REBUILDING.—And enlargement of the "Horse and Groom" public-house in Main-road is proposed by Messrs. Whitbread and Co., Ltd., Chiswell-street, E.C.1. The company's architect is Mr. P. H. Banks, F.R.I.B.A. No contracts placed.

SLOANE-STREET.—FLATS.—Plans prepared by Messrs. Gunton and Gunton, FF.R.I.B.A., Empire-house, St. Martin's-le-Grand. E.C.1, for a seven-storey block of flats at Nos. 104-113, and a three-floored block of flats and garages at 189-201, Pavilion-road, S.W. No contracts placed.

SUTTON.—MAISONETTES.—Plans have been passed for 16 maisonette flats and 7 garages at the corner of Carshalton-road and Albert-road. The architect and developer is Mr. Alexander Hunt, 31, Penrith-road, New Malden.

SYDENHAM.—ALTERATIONS.—Messrs. F. J. Moreton and Son, Ltd., 171, Gipsy-road, S.E.27, have secured the contract for alterations to the P.O. training school for H.M.O.W.

TEDDINGTON. — STORE. — H.M.O.W. has placed a contract with Messrs. Davis Contractors, Ltd., 312, Kilburn High-road, N.W.6, for a new engineering store at the National Physical laboratory.

TOTTENHAM.—HOUSING.—The T.C. are to obtain fresh tenders for the houses on the Scotland Green estate. The plans are by the Borough Engineer and the quantity surveyors are Messrs. Harris and Partners, 3, Bedford-square, W.C.1. The same quantity surveyors are to prepare the quantities for the Allington estate houses, and for the pavilion in the King George field, Markfield recreation ground.

WALTHAMSTOW.—ADDITIONS. — Messrs. W. J. Cearns, Ltd., Carpenters-road, Stratford, E.15, have been recommended for additional accommodation, refreshment room, etc., at Whipps Cross bathing pool, for the T.C. The tender price is £7,974.

WANDSWORTH.—ADDITIONS.—Mr. F. M. Kirby, of Messrs. Courage and Co., brewers, Horselydown, S.E.1, has prepared plans for additions at "The Seven Stars" beer-house, 81, Clifton-street.

WANDSWORTH.—ADDITIONS.—Mr. S. A. Heaps, chief architect to the L.P.T.B., has prepared plans for alterations and additions to Wandsworth Tram Depot, Jews-row. No contracts placed.

WANDSWORTH.—MAISONETTES.—Mr. B. G. Utting, builders, Gracefield-gardens, S.W.16, is erecting eight maisonettes with garages at rear on the western side, and ten maisonettes with garages at rear on the eastern side of Woodleigh-gardens, near its junction with Gracefield-gardens.

WANDSWORTH. — BUILDING. — The B.C. has accepted the estimate of Messrs. H. Bacon and Son, Ltd., at £4,585, for construction of first aid post and decontamination centre.

WANDSWORTH. — NURSERY. — The B.C. has accepted for the erection of the proposed day nursery building on a site in Fairfield-street adjoining the Municipal Buildings, the tender of Messrs. Walker (Tooting), Ltd., 99, Beddington-lane, Croydon, at £8,734 9s.

WILLESDEN. — EXTENSION. — Messrs. Arnott, Harrison (1928), Ltd., have placed a contract with Messrs. Frederick Coyle and Co., Ltd., High-street, Brentford, for the extension of their factory. Plans by Messrs. Dodge and Reid, 72, High-street, Brentford.

WOOD GREEN. — ADDITIONS. — For the alterations and additions to Bounds Green school the E.C. has recommended the tender of Messrs. John Willmott and Sons (Hornsey), Ltd., 40, Tottenham-lane, N.8, at £25,138 for acceptance.

WOOD GREEN. — GARAGES. — Mr. L. C. Ottley has had plans approved by the T.C. on behalf of Ottley Motors, Ltd., for the erection of 23 lock-up garages and a small workshop at their works in Crescent-mews, Crescent-road. The work is being done by direct labour.

WOOLWICH.—SHOPS.—Mr. S. F. Everson, 1, Charlton-road, Blackheath, has had plans approved by the B.C. for garages, shops and flats at 105-108, Brookhill-road.

NEW CINEMAS

ABERDARE.—The steelwork contract for the "Rex" cinema, High-street, has been placed with Edward Wood and Co., Ltd., Ocean Ironworks, Manchester. The architect is Mr. W. E. Willis. A.R.I.B.A., Globe-buildings, Penylan, Cardiff, in conjunction with Mr. A. Dadley Moore, 3, King's Bench-walk, Temple, E.C.4.

BRIDGEND.—Tenders are invited for the erection of a cinema for Messrs. Bridgend Cinemas, Ltd. The architect is Mr. E. Loveluck, A.R.I.B.A., 12, Dunraven-place, Bridgend.

LINCOLN.—Messrs. Leightons (Contractors), Ltd.. Evelyn House, Oxford-street, London. W.1, have secured the contract for the erection of a cinema at Staunton House, Newport. The architect is Mr. W. J. King, F.R.I.B.A., 16-17, Jermyn-street, London, S.W.1.

PUBLIC WORKS

GT. BRITAIN (Ministry of Health).—Following are notes on some loans sanctioned by the Minister of Health during the week ended October 22: Bootle C.B.C.—£12,025 for a library, assembly hall and housing estate office, Orrell; Hazel Grove and Bramhall U.D.C.—£66,781 for works of sewerage and sewage disposal; Luton B.C.—£185,947 for sewage purification works; Middlesex C.C.—£161,500 for purchase of property for improvement of Bell-road, Hounslow; Merthyr Tydfil C.B.—£100,278 for 216 houses, Galon Uchaf; Rhyl U.D.C.—£20,822 for sewage disposal works; Rochdale C.B.C.—£58,950 for market purposes; Rochester B.C.—£44,334 for Frindsbury Sen. Girls' Sch.; Southampton C.C.—£151,389 for schools at Eastleigh, New Milton, Copythorne, Whitchurch, Alton and Porchester; and £48,880 for extensions to schools at Andover and Cowplain; Strood R.D.C.—£14,539 for works of sewerage and sewage disposal for parish of Hoo.

GREAT BRITAIN. — Among contracts advertised in this issue by local authorities as being open to tender are: Northampton T.C.—extensions to College of Technology; Portsmouth T.C.—20 flats, Kent-street, and 24 flats, Providence-place; Isle of Man E.A.—new Senior School, Ramsey, I.O.M.; Bridgwater R.D.C.—36 houses; Coventry T.C.—Girls' School, Stoke; Shepton Mallet Isolation Hospital.—extensions, etc.

KEIGHLEY.—The T.C. has been recommended to approve the submission of plans for a new second-class swimming-bath, to cost £35,500, to the National Fitness Council, and also to approve a recommendation for the extension of the children's library, at a cost of £1,500.

MAIDENHEAD.—The Ministry of Transport has accepted a tender amounting to £127,867 for the construction of a new bridge over the Thames, near Bray Lock. Work is expected to start at an early date.

OLDBURY.—The T.C. have approved a recommendation that a site at the corner of Wolverhampton-road and Pound-road, Warley, be selected for the erection of new municipal buildings at a cost of £45 000. The Council have also approved the submission of a programme of capital works for the next five years, to cost £1,210,458, to the Ministry of Health.

SELSTON. — The Board of Education has approved plans for a new senior school at Selston, at a cost of £33,570.

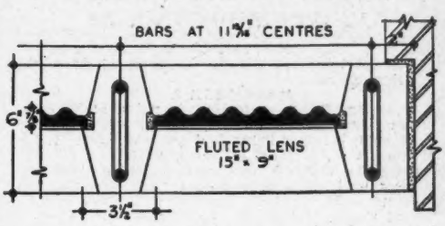
TAMWORTH.—The tenders of Messrs. Eadie and Co., Ltd., 29. Waterloo-road, Wolverhampton, at £33 324 and £3,970, for the erection of 96 houses and the construction of roads and sewers respectively have been accepted by the T.C.

WRITTLE.—The Agricultural Committee of the Essex County Council have accepted the tender, at £77,985, of Messrs. H. Smith and Sons, 44, Pier-avenue, Clacton, for the East Anglian Institute of Agriculture.

TRADE NEWS

The New Adelphi.

Apart from the glass and ferro-concrete roof lights and pavement lights, together with the 3,000 ft. super of "Insulight" hollow glass bricks erected by Lenscrete, Ltd., 11, Buckingham-gate, London, S.W.1, the firm also did two windows on the Adam-street side only. One is a glazed window to the main staircase, and the other is a precast mullion bar window some 6 ft. 2¾ in. wide by 66 ft. high to the fire escape staircase, unglazed. The glazed mullion window is 6 ft. 2¾ in. wide by 61 ft. 5¾ in. high, with reconstructed stone mullions, grooved to receive "H" or "T" section bronze horizontal bars, supported on ledges cast in the glazing grooves, providing support for each lens (see diagram). There are no holes or recesses; thus the risk of cracking or twisting caused through the shrinkage of an uneven section is eliminated. Mullions are spaced at 12-in. centres and glazed with 15-in. by 9-in. high relief special light-distributing lenses. They may be spaced up to 2-ft. 6-in. centres for fluted or sheet glazing. Heavier sections are available for special work.



Constructional Work.

Following is a list of orders received by the Helical Bar and Engineering Co., Ltd., 82, Victoria-street, S.W.1, during July, 1938: Shrivenham Barracks (additional blocks), floors, roofs, etc.; shops, Stourbridge, floors, etc. (S. A. Griffiths, F.R.I.B.A., architect); Culham College, Oxford, floors, roofs, etc. (Alan Brace, F.R.I.B.A., architect); reconstruction, Baker-street, W., floors, roofs, etc. (Guy Holt, F.R.I.B.A., architect); administration, stables, hostel and school blocks, Police H.Q., Maidstone, floors, roofs, stairs, etc. (W. H. Robinson, Borough Engineer, architect); new pharmacy for Nuneaton Co-operative Society, floors, roofs, etc. (H. N. Jepson, A.R.I.B.A., architect); Britannic Assurance Co., Clapham, S.W.9, floors, roofs, etc. (R. G. Covell, A.R.I.B.A., architect); Dralda House, High Wycombe, floors, roofs, etc. (W. J. Kieffer, architect); Whipps Cross Hospital, extensions, floors, roofs, etc. (W. Lionel Jenkins, Borough Engineer, architect); The Cinema, The Promenade, Cheltenham, floors, roofs, etc. (L. C. Norton, A.I.A.A., architect); Commonwealth House, floors, roofs, etc. (H. P. Cart de Lafontaine, F.R.I.B.A., architect).

Orders received during August: Rex House, floors, roofs, etc. (Robert Cromie, F.R.I.B.A., architect); High Speed Wind Tunnel, National Physical Laboratory, Teddington, floors, etc.; school, Quinton Farm Estate, Quinton, floors, roofs, etc. (Norman Twist, F.R.I.B.A., architect); telephone exchange, Wimbledon, floors, roofs, etc. (H.M.O.W.).

Orders received during September: 66-67, Newman-street, W., floors, roofs, etc. (Waite and Waite, FF.A.I., architects); housing scheme, Wandsworth, floors, roofs, stairs, etc. (G. L. Elkington, F.R.I.B.A., architect); Grays Co-operative Society, Gale-street, Barking, floors, etc.; flats, Back-lane, Brentford, floors, roofs, etc. (L. A. Cooper, L.R.I.B.A., architect); flats and shops, Northampton, floors, roofs, etc. (Beard, Bennett and Cooper, FF.R.I.B.A., architects); Eastwood senior school, Southend-on-Sea, floors, roofs, etc. (F. W. Smith, A.R.I.B.A., architect); fracture clinic, Hull, floors, roofs, etc. (Gelder and Kitchen, FF.R.I.B.A., architects); premises, Portwall-lane, Bristol, floors, roofs, etc. (W. H. Saunders and Son, M.I.Struct.E., architects).

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender, unless stated to the contrary. A dagger (†) denotes closing date for applications for particulars; other dates are those for the submission of tenders; the name and address at the end refer to the person from whom particulars may be obtained. Abbreviations: (A.) for A.R.I.B.A.; B. of E. for Board of Education; B.C. for Borough Council; B.E. for Borough Engineer; B.S. for Borough Surveyor; C. for Clerk; C.B. for County Borough; C.C. for County Council; C.E. for County Engineer; C.S. for County Surveyor; D.S. for District Surveyor; E. for Engineer; E.C. for Education Committee; (F.) for F.R.I.B.A.; (L.) for L.R.I.B.A.; M.W.B. for Metropolitan Water Board; M.H. for Ministry of Health; M.T. for Ministry of Transport; P.C. for Parish Council; R.D.C. for Rural District Council; S. for Surveyor; T.C. for Town Clerk and Town Council; and U.D.C. for Urban District Council.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, &c.

NOVEMBER 7.

***Newport Pagnell U.D.C.**—28 houses at Broad-st. C. Dep. £5 5s.

NOVEMBER 9.

Axminster R.D.C.—8 houses, in pairs, at Walley-ln., Uplyme. F. S. Kett, registered architect, Greatham, between Petersfield and Farnham. A. C. Hughes, C.S., Winchester. Dep. £1 1s.

Dewsbury C.B.—Demolition of existing stone retaining wall and construction of a new reinforced concrete retaining wall, together with other appurtenant works, Halifax-rd. L. G. Mouchel & Ptnrs., Ltd., engineers, 36-38, Victoria-st., Westminster, S.W.1. Dep. £3 3s.

Dublin C.B.—Alterations and additions to gate-keeper's lodge at Corporation Waterworks, Ballyboden. City Architect, Exchange-bldgs., Lord Edward-st.

Essex C.C.—Police station, Laindon. J. Stuart, (F.), Chelmsford. Dep. £2 2s.

Hants C.C.—Cleft oak fencing and gates in connection with improvement of road, south of Axminster. Dep. £1 1s.

***Kent C.C.**—Engineering services and electrical installation at Leybourne Grange Colony, West Malling. W. H. Robinson (F.), Springfield, Maidstone. Dep. £5 5s.

London (H.M.O.W.).—Harehills (Leeds) District Postmen's Office; Robin Hood Wells (Doncaster) Telephone Repeater Station; South Brent (Devon) Telephone Exchange; internal painting and cleaning at Admiralty-bldgs. and external and internal painting at Money Order Office, Manor-gdns., Holloway. Room 65D, Third Floor, Office of Works, S.W.1. Dep. £1 each.

***Northampton T.C.** — Extensions to College of Technology. Keightley Cobb (L.), 46, Hazelwood-rd. Dep. £5 5s.

Norwich T.C.—Small dock and landing stage for motor launch at proposed mortuary in Barrack-st. City E.

Soke of Peterborough C.C.—Painting and decorating at Station Bungalow, Barnack, and Station House, Barnack. W. J. Deacon, C., Bridge-st., Peterborough.

Worksop T.C.—Wrought-iron fencing and gates. B.E.

NOVEMBER 10.

Belfast C.B.—Heating installation at Oldpark P.E. school; electric lighting installation at Oldpark P.E. school. Education Architect, Victoria-st. Dep. £1 1s. each.

Bingham R.D.C.—Wiring, for purposes of electric lighting and power, 35 houses. C. W. Kendrick, S. Dep. £1.

Birkenhead C.B.—Work at 42, Hamilton-sq., for conversion into municipal clinic. B.E. and S.

Castlederg Union Hospital.—Alterations and additions to domestic hot water installation, and forming alterations and extensions to heating installations of hospital buildings and administrative block. F. D. Brown & Sons, consulting engineers, Bank of Ireland-chams., Queen's Bridge, Belfast. Dep. £2.

Cheltenham R.D.C.—22 houses. E. H. Rosser, Building S., 14, Imperial-sq. Dep. £2 2s.

Dewsbury C.B.—Painting and decorating work at Thornhill C.E., Thornhill Lees C.E. Infants, St. Joseph's R.C., School Clinic. Borough Architect and Buildings Surveyor.

Leeds T.C.—Taking down of existing stone boundary walls, fencing, gates and pillars, Harehills-ln., from Avenue-cres. to Hill Top Mount, and re-erection of boundary walls, etc., along new frontage line. J. E. Acfield, City E.

London (H.M.O.W.).—Pontardulais Employment Exchange; Salisbury Telephone Repeater Station and Wittering (Northants) Telephone Repeater Station. Room 65D, Third Floor, Office of Works S.W.1. Dep. £1 each.

Manchester T.C.—Public conveniences at Princess Parkway, Wythenshawe. City Architect. Dep. £1 1s.

Nottingham T.C. — Heating and hot-water service works at City Isolation Hospital, Hucknell-rd. E. G. Phillips, Son & Norfolk, consulting engineers, Arskus House, Annesley-gr.

Romney Marsh R.D.C.—Two pairs of cottages at Newchurch. D. G. Evans, Building Inspector, "Dulce Domum," Orgarswick-av., Dymchurch. Dep. £2 2s.

Wolverhampton C.B. — Alterations to form garages, Crown-st. depot. H. B. Robinson, B.E. Dep. £2 2s.

NOVEMBER 11.

Birmingham T.C.—Oak block flooring for isolation blocks at Little Bromwich Hospital. F. H. C. Wiltshire, T.C. Dep. £2 2s.

Blackburn C.B.—Timber framed sports pavilion at Pleckgate playing fields. The Borough and Water Engineer. Dep. £1.

Chester C.C.—Senior school, Acre-ln., Bromborough. F. Anstead Browne (F.). Dep. £2 2s.

Chester C.C.—Alterations and additions at Wirral County School for Girls. F. Anstead Browne (F.), County Architect, Chester. Dep. £1 1s.

Commissioners of Public Works. — Clonbur National School, improvements; Boher National School, erection; Conahy National School, erection; Ballycullane National School, erection; Rockhill House, Letterkenny, adaptations. Geo. P. Fagan, Sec., Dublin. Dep. £1 each.

Darlaston U.D.C.—222 houses, Bentley—site "A." H. N. Hughes, E. and S. Dep. £3 3s.

Doncaster R.D.C.—Installing internal wiring services at Council houses at Askern, Barnby Dun and Rossington. S.

Doncaster R.D.C. — Redecoration of Council offices, Nether Hall. S.

Eton U.D.C.—4 four-bedroom houses, 8 three-bedroom houses, 8 one-bedroom houses, together with roads and sewers, at Bell's Field, Eton Wick. S. Dep. £2 2s.

Gwyrfai R.D.C.—Dry stone boundary walls at Cwmyglo, 220 yds. lin.; Rhosgadfan, 133 yds. lin.; Waenfawr, 110 yds. lin.; Nantlle, 63 yds. lin. D. H. Roberts, S., 22, Castle-sq., Caernarvon.

Hornsey T.C.—12 garages at Marriott-rd., Muswell Hill, N.10. J. H. Melville Richards, Acting B.E. and S. Dep. £2.

***Isle of Man E.C.**—Senior school at Ramsey. A. J. Davidson (A.), Athol-st., Douglas, I.O.M. Dep. £2 2s.

Irish Land Commission.—5 houses and offices, Gurteen; house and outoffice, Castledillon; 2 houses and outoffices, Tinnaranny; and house, Sunville Upper. M. Deegan, Secretary, Upper Merrion-st., Dublin. Dep. £1.

London (H.M.O.W.).—Sutton Engineering Depot. Room 65D, Third Floor, Office of Works, London, S.W.1. Dep. £1.

Manchester T.C.—Steel shelving. J. H. Cadman, Commercial Manager and Secretary, Gas Dept.

***Merton and Morden U.D.C.**—Alterations, etc., to Ravensbury-gdns., Mitcham. E. and S. Dep. £1.

Middlesbrough C.B.—Garage, improved entrance gates and alterations to main corridor, at Holgate Municipal Hospital; painting of West-ln. Hospital; and painting of Children's Hospital block and Nurses' Home at Municipal Hospital, Holgate. Cecil Gorman, Borough Engineer, Architect and Surveyor. Dep. £4 4s.

Mitcham.—Decoration and alteration to Ravensbury Gardens, Morden-rd., for Ravensbury Park Joint Committee. E. and S. to Merton and Morden Council. Dep. £1.

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Richmond (Surrey) T.C.—River wall at Lots Eyot. B.E. and S. Dep. £1 1s.

West Ham T.C.—Electricity sub-station at Crows-rd. B.E. Dep. £1.

***York T.C.**—Foundations for municipal offices at York Castle. T.C.

NOVEMBER 12.

Accrington T.C.—Public shelters, conveniences, bowl house and tool house, Peel Park. H. Sanderson, B.E. Dep. £1 1s.

Cartorth U.D.C.—Alteration of Council offices. R. A. Easdale & Son, chartered architects and surveyors, County-chambs., Castleford. Dep. £2 2s.

Halstead U.D.C.—92 tool sheds at rear of Council houses on Mitchell-av. housing estate. W. A. Nicholson, S.

Hebburn U.D.C.—Installation of electric services into 120 existing Council houses. E. G. Lediard, A.M.Inst.C.E. Dep. £1 1s.

Hull Corporation.—Automatic telephone exchange in King-st., Cottingham. City Architect. Dep. £1 1s.

Monaghan Board of Health and Public Assistance.—Health clinic at Clones, Co. Monaghan. John F. McGahon & Son, architects, 9-18, Exchange-bldgs., Dundalk. Dep. £5 5s.

Newcastle-upon-Tyne T.C.—Heating and hot-water installation; electric lighting installation, for new maternity units at Newcastle General Hospital; and heating and hot-water installation and supply of metal windows and lantern lights, for new isolation block at the City Hospital for Infectious Diseases. City Architect, 18, Cloth Market.

***Norwich T.C.**—Various trades in connection with Angel-rd. School reorganisation. City Architect.

Oldham T.C.—166 houses. B.E. and S. Dep. £2 2s.

West Riding C.C.—Installation of electric light at Ryhill Council school. F. R. Mann, 8, St. John's North, Wakefield.

West Riding C.C.—Removal of two screens and making good floor and ceiling in two classrooms, at Wombwell Park-st. council school. C. Ellison, divisional clerk, Education Office, Rock House, Swinton, Mexborough.

West Riding C.C.—Electric lighting at Rothwell-Carlton council school. P. Beaumont, 8, St. John's North, Wakefield.

West Riding Mental Hospitals Board.—Internal decoration of admission hospital at Menston Mental Hospital, nr. Leeds. W. E. H. Burton, Assoc. M.Inst.C.E., Architect and Engineer to Board, Wakefield.

West Riding.—Installation of electric lighting in Stanley Wrenthorpe Council school. Percy Beaumont, divisional clerk, 8, St. John's North, Wakefield.

Worthing T.C.—Transformer room and extensions to café at Marine-gdns. B.S

NOVEMBER 14.

Belfast C.B.—Public sanitary convenience in Victoria Park and Belfast-Holyrood By-pass-rd.; public sanitary convenience, Albertbridge-rd.; and taking down and rebuilding wall of Belfast Ropework Co.'s premises at corner of Newtownards and Albertbridge-rds. City Surveyor (Architectural Section, Room 91), City Hall.

Brierley Hill U.D.C.—Alterations to Town Hall. R. H. J. Comber, E. and S.

Buckie T.C.—14 houses at Buckpool. B.S.

Burton-upon-Trent C.B.—Demolition of 71 to 90, Wetmore-rd. (inclusive) and clearance of sites. B.E. and S.

Carshalton U.D.C.—10 houses, St. Andrew's-rd. and Green Wrythe-ln., Carshalton. R. S. Davey, E. and S. Dep. £2 2s.

Golspie.—Works, offices and alterations to Golspie Drill Hall, for Sutherland Territorial Army Assoc. Horne & Murray, architects, Golspie.

Goole T.C.—Public mortuary in Alexandra-st. J. H. Castle, B.E. Dep. £3 3s.

Halifax T.C.—Various trades in connection with 242 houses and 50 bungalows, Backhold-la. estate, and 60 houses and 50 bungalows, Nursery-la. estate. B.E., Crossley-st. Dep. £2 2s.

Hebburn U.D.C.—Six public conveniences. S. G. Lediard, E. and S. Dep. £2 2s.

Hyde T.C.—Erection of dining centre and kitchen. Secretary for Education, Education Office. Dep. £1.

London (H.M.O.W.). — Whittlesey (nr. Peterborough) Telephone Exchange. Room 65D, Third Floor, Office of Works, S.W.1. Dep. £1.

Luton T.C.—Messroom, on Luton Airport. J. W. Tomlinson, B.E.

Manchester T.C.—248 residential flats at Miles Platting. R. H. Adcock, T.C. Dep. £2 2s.

Monmouthshire E.C. — Boundary and retaining walls, block of latrines and drainage at Dukestown mixed and infants' council school, Tredegar. Colin L. Jones (F.), County Hall, Newport. Dep. £2 2s.

Monmouthshire E.C.—Repairs and renewals at Tredegar Cottage Homes. Colin L. Jones (F.), County Hall, Newport. Dep. £2 2s.

Musselburgh T.C. — 89 houses, Linkfield-rd. site (Ashgrove). J. Logan, B.S.

Pickering U.D.C.—12 houses south of Ruffa-ln. Henry Smith, F.I.A.S., architect, Burgate. Dep. £1 1s.

Salford T.C.—Bowls pavilion in Buile Hill-pk., Pendleton. City E. Dep. £1 1s.

Salford T.C.—Repair to houses. Medical Officer of Health, 143, Regent-rd.

Sheffield T.C.—Steam and condense mains in pipe subways to calorifiers in four ward blocks at Lodge Moor Hospital extensions schemes 5 and 6. W. Geo. Davies (F.), City architect. Dep. £2.

South Cork County Board of Public Assistance.—Chapel, porter's lodge, mortuary, entrance gates, etc., at Youghal District Hospital. James Hurley, secretary, Boardroom, Douglas-rd. Dep. £10.

Tendring R.D.C.—Bungalows and houses. S. E. Carroll, S. Dep. £2 2s.

Totnes R.D.C.—Wiring Council's 6 houses at Ugborough. R. J. P. Madge, Building S., 26, High-st.

Tunbridge Wells T.C.—Public library and museum. Thomas & Prestwick (FF.), 10, Cathedral-rd., Cardiff. Dep. £2 2s.

Wellingborough U.D.C.—Alterations and decorations at public library, High-st. E. and S.

Wellington R.D.C.—22 dwelling houses at Lawley Bank. James Hickman & Son, incorporated architects, Wellington. Dep. £2 2s.

West Riding C.C.—Conversion of infants' w.c.s at the Burnley-rd. school, Mytholmroyd. J. H. Crabtree, Allan House, Sowerby Bridge.

NOVEMBER 15.

Blackpool T.C.—Electrical installation at Derby Bath. B.E. and S. Dep. £2 2s.

***Bootle T.C.**—Glazed ware in connection with Balliol-rd. baths. B.E. and S.

Carmarthenshire C.C.—Conversion of offices and drainage works at Capel Evan School. County Architect.

Chester C.C.—Painting and decoration of portion of Grosvenor Museum and public elementary schools. City E. and S.

Commissioners of Public Works.—Streamstown National school—improvements, and Oulart National school—improvements. Geo. P. Fagan, secretary, Dublin. Dep. £1 each.

Essex C.C.—Senior school at Broomfield. J. Stuart (F.), Chelmsford. Dep. £2 2s.

Essex C.C.—Reconstruction of Woodford Churchfields Council school. J. Stuart (F.), County Architect, Chelmsford. Dep. £2 2s.

Fife C.C.—Reinstatement, additions and alterations, Viewforth H.G. School, Loughborough-rd., Kirkcaldy. G. Sandilands, architect, Property and Works Department, Wemyssfield, Kirkcaldy.

Kidderminster T.C.—Extensions to Foley-pk schools. B.E. and S., 110, Mill-st. Dep. £2 2s.

Manchester (H.M.O.W.).—Adaptations at R.A.F., V.R., 3, Albert-st. Room 65D, Third Floor, Office of Works, London, S.W.1. Dep. £1.

Mobberley, Cheshire (H.M.O.W.). — Telephone exchange. Room 65D, Third Floor, Office of Works, London, S.W.1. Dep. £1

Sheffield T.C.—186 non-parlour type houses on Parson Cross estate, building scheme No. 18. W. Geo. Davies (F.), City Architect. Dep. £2.

Southampton C.B.—Electrical installation at Middle-rd. senior girls' school, Sholing. W. G. Turner, B. Electrical Engineer. Dep. £1 1s.

NOVEMBER 16.

Banstead U.D.C.—External decorations to 32 houses, Oatfield-rd., Tadworth. S.

Bexhill T.C.—Brick-built water tower at Wrestwood reservoirs. Water E.

Dundee T.C.—Extensions to boiler-house, bunker house and new chimney foundation at generating station, Carolina Port. D. H. Bishop, General Manager and Engineer, Dudhope Crescent-rd.

Durham C.C.—Improvement at Barclays Bank Corner, Birtley; construction of boundary wall in Ashlar Masonry. Wm. J. Merrett, C.E. and S., 43, Old Elvet, Durham.

Hull (H.M.O.W.).—Telephone repeater station. Room 65D, Third Floor, H.M.O.W., London, S.W.1. Dep. £1.

Limerick.—Workshop at Ardnacrusha power station, for Electricity Supply Board. Chief E., Civil Works Dept., Electricity Supply Board, 40, Merrion-sq., Dublin. Dep. £10 10s.

London (H.M.O.W.).—Hull telephone repeater station, Wythenshawe postmen's office and internal painting, etc., at Ministry of Pensions, Bromyard-av., Acton. Room 65D, Third Floor, Office of Works, London, S.W.1. Dep. £1 each.

Manchester (H.M.O.W.). — Postmen's office at Wythenshawe. Room 65D, H.M. Office of Works, London, S.W.1. Dep. £1.

***Portsmouth T.C.**—20 flats, Kent-st., and 24 flats, Providence-pl. Adrien J. Sharp (L.). Dep. £3 3s. each.

Portsmouth T.C.—Builder's work in connection with children's cottage homes. City Architect. Dep. £1 1s.

Rochdale C.B.—Internal painting and decorating at central public library and museum and at Balderstone, Norden, and Bamford branch libraries. B.S.

Scarborough T.C.—Painting with bituminous paint certain parts of steelwork of Valley Bridge. H. V. Overfield, B. and Water E.

Sunderland C.B.—Extensions to Havelock senior schools. Education Architect, 15, John-st. Dep. £2 2s.

Wallasey C.B.—Four police sub-stations at Poulton-rd., Oakdale-rd., Hose Side-rd. and Marine Promenade. B.S. Dep. £1 1s.

NOVEMBER 17.

Birmingham (H.M.O.W.).—Alterations to head post office. Room 65D, Third Floor, Office of Works, London, S.W.1. Dep. £1.

Egham, Surrey (H.M.O.W.).—Telephone repeater station. Room 65D, Third Floor, Office of Works, London, S.W.1. Dep. £1.

Neath T.C.—Girls' senior school at Crythan Park. B.E. Dep. £5 5s.

Southampton C.B.—Engineering work in connection with heating, domestic hot and cold water supplies, fire services and kitchen fittings proposed for boiler house, kitchen unit, infirm unit and staff home at West End Institution. S. G. Stanton, B.E. Dep. £5.

***Southwell R.D.C.**—Two pairs of non-parlour type three-bedroomed houses, Lowdham. S. Cooper, S. Dep. £1 1s.

Wallasey C.B.—Boiler-house, pipe ducts, etc., at isolation hospital, Mill-ln. B.S. Dep. £2 2s.

NOVEMBER 18.

Lisburn and Belfast E.C.—W.I. entrance gates and railings and boundary fencing at new P.E. school at Whiteabbey. R. Ferguson, architect, 36-38, Scottish Provident-bldgs., Belfast.

Londonderry C.C.—Alterations, etc., to library premises at Abbey-st., Coleraine. W. & M. Given, architects, The Diamond, Coleraine.

Newcastle-upon-Tyne T.C. — Decontamination depot in Stratford-grove West. City Architect, 18, Cloth Market. Dep. £1 1s.

***Norwich T.C.**—Stores and Workshops, Duke-st. A. F. Scott & Sons (FF.), 23, Tombland. Dep. £3 3s.

Southgate T.C.—Rebuilding sun-bathing enclosure at café, Barrowell Green Baths. B.E. and S. Dep. £2.

Stirling (H.M.O.W.).—Maintenance works at Government buildings. Secretary, 122, George-st., Edinburgh.

Walsall T.C.—Adapting existing buildings between Upper Rushall-st. and Goodall-st., to provide hostel. B.S. Dep. £3 3s.

Yorkshire (H.M.O.W.).—Earby Telephone Exchange. Room 65D, Third Floor, Office of Works, London, S.W.1. Dep. £1.

NOVEMBER 19.

Bath T.C.—Installation of electric lighting in 260 houses at Englishcombe Park housing estate. City Electrical Engineer. Dep. £1 1s.

Ceiriog R.D.C. — Public conveniences at Glynceiriog, Wrexham, and demolition of two cottages and erection of four non-parlour type houses at Pentrefelin, Oswestry. R. W. Aubrey, S. Dep. £2 2s.

Dorking U.D.C.—Sheet piling and rubble retaining wall; levelling of site, seeding and forming footpaths; and erection of children's shelter, conveniences and incidental works at Meadowbank recreation ground. S. S. Gettings, E. and S. Dep. £2 2s.

Mansfield T.C.—12 houses in Shaftesbury-av. and Abbott-rd. W. Thompson, B.E. Dep. £1 1s.

Sedgley U.D.C.—Painting of ironwork at Beacon Hill and Upper Gornal disposal works, etc. A. E. Dicks, Assoc.Mem.Inst.C.E. Dep. 10s.

***Swinton and Pendlebury T.C.**—School at Grosvenor-rd., Swinton. H. Bennett (A.), Dales Brow Dep. £2 2s.

Wallasey C.B.—Alterations in Vaughan-rd. council school. J. E. Bladon & Son, q.s., 16, Albert-bldgs., 12, Preeson'-row, Liverpool, 2.

NOVEMBER 21.

Barking T.C.—Gymnasia and dining centres at Eastbury and Erkenwald schools. C. C. Shaw (A.). Dep. £5 5s.

***Blaenavon U.D.C.**—58 houses on Coed housing site. S. Dep. £2 2s.

***Brighouse T.C.**—96 houses at Lillands-av. B.E., Commercial-st. Dep. £1 1s.

Chesterfield T.C.—Alterations to Stephenson Memorial Hall, Corporation-st. B.E. Dep. £2 2s.

Liverpool T.C.—Alterations and additions at Ackers Hall Council school, Knowsley. Land Steward and Surveyor (Architectural Department). Dep. £2 2s.

***London (H.M.O.W.).**—Whalley Telephone Exchange (Lancs). Room 65D, Third Floor, Office of Works, S.W.1. Dep. £1.

***Manchester T.C.**—6 shops at Hollyhedge-rd., Wythenshawe. City Architect. Dep. £1 1s.

West Riding C.C.—Mexborough—enlargement of infants' department at Doncaster-rd. Council school; and Rossington—county library. Education Officer, County Hall, Wakefield.

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NOVEMBER 22.

Beeston and Stapleford U.D.C.—Demolishing and clearing away all debris of houses, 34, 34a, 34b, 34c, 34d, 36, 38 and 40, Nottingham-rd., Stapleford. C. H. Wragg, C.

***London (H.M.O.W.).**—Castletown Telephone Exchange (Isle of Man). Room 65D, Third Floor, Office of Works, S.W.1. Dep. £1.

Merioneth C.C.—New Council school at Dinas Mawddwy, and gymnasium at Towyn County school. Norman L. Jones, County Architect, Dolgelley. Dep. £3 3s. each.

Northfleet U.D.C.—Shops, office store rooms and other buildings and yard paving at Council's Brookvale depot, Springhead-rd. S. Dep. £2 2s.

***Portsmouth T.C.**—Rebuilding of Blind Persons' Shop, 182, Fratton-rd. Adrien J. Sharp (L.). Dep. £1 1s.

NOVEMBER 23.

Blandford R.D.C.—Four three-bedroomed houses, Farnham. E. A. Down, architect, Aldermoors, Ringwood. Dep. £1.

NOVEMBER 24.

***Finsbury B.C.**—Interior decoration of (*a*) living rooms at Grimaldi Houses, Calshot-st. and (*b*) bedrooms at 34-118, Mandeville Houses, Liverpool-rd., N.1. B.E., Town Hall Annexe, Rosebery-av., E.C.1.

Huddersfield C.B.—Low-pressure heating and domestic hot-water installations at Almondbury grammar school extensions. Education Architect, Education Offices, Peel-st.

***London (H.M.O.W.).**—Rebuilding of Edmonton County Court. Room 65D, Third Floor Office of Works, S.W.1. Dep. £1.

NOVEMBER 25.

***London (H.M.O.W.).**—Buildings at Moss Side State Institution, Maghull. Room 65D, Third Floor, Office of Works, S.W.1. Dep. £1.

Norfolk C.C.—Internal renovations, King's Lynn poor law institution. County Architect, 25, Thorpe-rd., Norwich.

NOVEMBER 26.

Ruislip U.D.C.—680 lin. yds of chain-link fencing at New Pond Farm playing fields, West End-rd., Ruislip. E. and S.

NOVEMBER 28.

***London (H.M.O.W.).**—Extension of St. Annes-on-Sea post office. Room 65D, Third Floor, Office of Works, S.W.1. Dep. £1.

Thurrock U.D.C. — Nurses' home at Isolation Hospital, Stifford Long-la., Grays. E. and S. Dep. £2 2s.

***West Riding of Yorkshire C.C.**—Senior school and caretaker's house at Mytholmroyd, nr. Halifax. Education Office, Wakefield.

NOVEMBER 29.

***Bridgwater R.D.C.**—36 houses in various parishes. C.

DECEMBER 1.

***Shepton Mallet.**—Extensions, etc., to Isolation Hospital. Pictor & Snailum (F./A.), Abbey-chambs., Bath. Dep. £2 2s.

DECEMBER 2.

Chatteris U.D.C.—Open-air swimming pool and necessary buildings in connection therewith in recreation ground, Wenny-rd. Solden Hipwell, S., 19, New-rd. Dep. £2 2s.

DECEMBER 3.

Southampton C.B.—Four garages at Chapel Wharf. B.E. Dep. £2 2s.

DECEMBER 6.

***Coventry T.C.**—School at Stoke. Director of Education. Dep. £1 1s.

MATERIALS, &c.

The materials for which tenders are invited normally include one or several of the following :—asphalt, bricks, brooms, building lime, cast-iron pipes, cement, concrete kerbs, etc., concrete tubes, drain pipes, glazed stoneware pipes, granite chippings, granite kerbs, gravel, gulleys, lime, manhole covers, painters' materials, plumbers' materials, road stone slates, stoneware pipes, sand, stone, tar, tarslag and bituminous macadam, timber, and whinstone screenings. Readers should obtain full particulars by personal inquiry.

NOVEMBER 10.

Manchester Corporation.—Pipes and manhole covers, etc. Secretary, Waterworks Offices.

NOVEMBER 11.

Litherland U.D.C.—Geo. Ponsford, E. and S.

Prestwich County Mental Hospital.—Wrought-iron fencing. Clerk and Steward, County Mental Hospital, Prestwich, Manchester.

NOVEMBER 12.

Langport R.D.C.—J. E. Sanders, District Surveyor's Office, North-st.

Leicester T.C.—A. T. Gooseman, City E. and S.

Montgomeryshire E.C. — Furniture, woodwork and metalwork tools. Director of Education, Newtown. Dep. £2 2s.

NOVEMBER 14.

Croydon C.B.—Cast and spun-iron pipes and specials. Water E., 70, Park-ln.

Hucknall U.D.C.—Cast-iron pipes and steel tubes. S.

New Windsor T.C.—F. N. McRae, B.E., 16, Alma-rd.

Norfolk C.C.—S. H. Warren, C.S., Stracey-rd., Norwich.

Southport C.B.—Sanitary fittings for 24 dwellings, Warwick-st. B.E. Dep. £1 1s.

Stamford T.C.—F. R. Ryman, B.E. and S.

Williton R.D.C.—F. P. Risdon, C.

NOVEMBER 15.

Bridgwater R.D.C.—C., The Priory, St. Mary-st.

Glastonbury T.C.—R. O. Winfield, B.S.

ENGINEERING, IRON AND STEEL.

NOVEMBER 9.

Canvey Island.—East Promenade extension. C. R. Butcher, E. and S. Dep. £1 1s.

Middlesex C.C.—River Crane, improvement between The Meadway and Hospital Bridge, and Yeading Brook, improvement from Uxbridge-rd. for 2 miles towards Charville-av. C.E., "A.1," 16, Great George-st., S.W.1. Dep. £2 2s.

NOVEMBER 11.

Belper R.D.C.—For Smalley sewerage scheme. Elliott & Brown, engineers, Burton-bldgs., Parliament-st., Nottingham. Dep. £3 3s.

NOVEMBER 12.

Argyll C.C.—Clearing, fencing, drainage, earthworks, bridges, culverts, walls, carriageway, and other works, for reconstruction of Drimfern-Stronchreggan section of Drimfern-Salen-rd. C.E., Lochgilphead, Argyll. Dep. £3 3s.

Dorking and Horley R.D.C.—Settling tank and filter bed, etc., at Council's cottages, "Westview," Newdigate. F. E. Traviss, S.

Morecambe and Heysham T.C.—Works of sewerage (contracts Nos. 2, 3 and 4). A. H. S. Waters, E., 25, Temple-row, Birmingham, 2. Dep. £5 5s.

NOVEMBER 14.

Bromley T.C.—Sewerage in Keston-av. and Lakes-rd., Keston. Harold Cliffe, B.E. Dep. £1.

Perth and Kinross C.C. — Reconstruction of Crathies Bridge, Meigle, over River Isla, Alyth-Meigle-rd. F. A. Macdonald & Partners (Glasgow), Ltd., consulting engineers, 135, Wellington-st., Glasgow, C.2. Dep. £10 10s.

South Africa (African Railways and Harbours Administration).—Steelwork for workshops for motor services, Cape Town. Dept. of Overseas Trade, Westminster, S.W.1.

Worthing R.D.C.—First section of Ferring Rife improvement scheme. Howard Humphreys & Sons, consulting engineers, 17, Victoria-st., Westminster. Dep. £3 3s.

NOVEMBER 15.

Cairo.—Intake culvert, storage reservoirs, and rest-house and office at kilometre 27 on Bahr Tira, nr. El-Khosha, and two water towers; pump-house and machinery at site of storage reservoirs; water pipelines and branches, for Under-Secretary of State. Inspecting Engineer to Egyptian Government, 41, Tothill-st., London, S.W.1.

Skipton R.D.C.—Covered concrete reservoir, Gargrave. A. Rodwell, E. and S., Granville-st. Dep. £2 2s.

NOVEMBER 16.

Hawarden R.D.C.—For Tryddyn sewerage scheme. G. I. Reidford, S. Dep. £3 3s.

ROAD, SEWERAGE AND WATER WORKS.

NOVEMBER 9.

Droylsden U.D.C.—Reconstruction of main drive in cemetery. S.

Erith U.D.C.—Removal of tramway track and reconstruction of carriageway in 9 in. reinforced concrete, approximately 9,000 super yds., and surface-water drainage and other incidental work, Bexley-rd. J. H. Clayton, E. and S. Dep. £1 1s.

Erith U.D.C.—Making-up Cumberland-dr. from King Harold's-way. J. H. Clayton, E. and S. Dep. £1 1s.

Hale U.D.C.—Making-up four streets. C. P. Higginbotham, S. Dep. £2 2s.

Larne R.D.C.—230 lin. yds. of 12-in. fireclay pipes with manholes at Station-rd., Greenisland. S. Robinson, E., Victoria-st.

Luton T.C.—Construction of Weatherby-rd., Atherstone-rd., Oakley-close and Oakley Close-passage. J. W. Tomlinson, B.E. and S. Dep. £2 2s. each road.

Middlesex C.C.—Improvement at junction of Falloden-way and Brooklands-rise, Hampstead Garden suburb. C.E., "T," No. 16, Great George-st., S.W.1. Dep. £2 2s.

Sunderland C.B. — Sewering, levelling, paving, flagging, channelling, etc., The Knoll. B.E. and S. Dep. £1 1s.

NOVEMBER 10.

Cheeping Wycombe T.C.—Reconstruction and improvement, Cressex-rd. and New-rd., on Wycombe-Marlow-rd. to Rutland-av. J. A. Parkinson, B.S. Dep. £2 2s.

Reading C.B.—Improvements in Audley-st. and Valentia-rd. B.S. Dep. £2 2s.

Sedgley U.D.C.—Asphalt footpaths. A. E. Dicks, S. Dep. £1 1s.

NOVEMBER 11.

Altrincham T.C.—Making-up, etc., of Rossett-av. H. E. Brown, B.S. Dep. £2 2s.

Colwyn Bay T.C.—Construction of carriage drives in Eirias-pk. W. J. Dunning, B.E.

Fife C.C. — Widening Drummochy-rd., Lower Largo. C. M. Dawson, road surveyor, 90, South-st., St. Andrews. Dep. £1 1s.

Keighley T.C.—Making-up of Richmond-st. R. Courtenay Gibson, B.E. and S. Dep. £1 1s.

King's Lynn T.C.—Reconstruction of part of Tennyson-rd. J. C. Matthew, B.E.

Urmston U.D.C.—Making-up various streets. E. L. Leeming, E. and S. Dep. £2 2s.

NOVEMBER 12.

Chatham T.C.—Surfacing with 2 in. asphalt on new 8-in. concrete foundation a portion of carriageway at New-rd. R. L. Honey, F.S.I., B.E. and S. Dep. £2 2s.

Dorking U.D.C.—Making-up of Fairfield-dr. S. S. Gettings, E. and S. Dep. £2 2s.

Hailsham R.D.C.—Approximately 173 yds. of 6-in. concrete tube sewer, together with necessary manholes, at Willingdon. S.

Harrow U.D.C.—Making-up and reconstructing roads. H. W. Rackham, S. Dep. £3 3s.

Hertford T.C.—Making-up Westfield-rd. and The Avenue. B.S. Dep. £2 2s. each.

Manchester T.C.—Draining and paving roads. R. H. Adcock, T.C. Dep. £1 1s.

Morecambe and Heysham T.C.—Making-up 11 front streets and 2 back streets. B.S. Dep. 10s. each street.

Plymouth T.C.—Making-up of 8 private streets. J. Paton Watson, City E. and S. Dep. £2 2s.

Ramsgate T.C.—Making-up Granville-av. B.E.

NOVEMBER 14.

Bebington T.C.—Asphalting New Chester-rd. L. Birch, B.E. and S. Dep. £2 2s.

Birkenhead C.B.—Construction of embayment to carriageway, etc., of Arrowe Park-rd., adjacent to police station. B.E. and S.

Blackpool C.B.—Surface draining and formation of North-dr. and 27 other streets. B.E. and S. Dep. £1.

Broadstairs U.D.C.—Making-up Carlton-av. S. W. Richardson, Pierremont Hall, Broadstairs. Dep. £2 2s.

Eastbourne C.B.—Improvements in passage at rear of Victoria-dr. B.E.

Luton T.C.—Light road at Luton Municipal Airport. J. W. Tomlinson, B.E. and S. Dep. £2 2s.

Wallasey C.B.—Paving roadway at motor bus depot, Seaview-rd. B.S.

NOVEMBER 15.

Bradford T.C.—Widening of north wing from Wapping-rd. to Wright-st. City E. Dep. £1 1s.

Dublin Board of Public Health.—Clondalkin sewerage and Newlands Cross sewer extension. T. B. Byrne, E. to Board, 6, Parnell-sq., Dublin. Dep. £2 2s.

Hazel Grove and Bramhall U.D.C.—Making-up of Brampton-rd., Bramhall; Grange-rd. (part of). S. Dep. £2.

Heston and Isleworth T.C.—Reconstructing carriageway of part of Whitton-rd. J. G. Carey, B.E. and S. Dep. £2 2s.

NOVEMBER 16.

Chelmsford T.C.—Widening and reconstruction, Patching Hall-ln. V. J. Willis, B.E. and S. Dep. £2 2s.

Hawarden R.D.C.—Tar macadam surfacing, kerbing, etc, to streets on Shotton and Caergwrle housing schemes. George I. Reidford, Council Offices.

NOVEMBER 17.

Ennis U.D.C.—Sewerage scheme at Ennis, County Clare. P. J. Sheahan, consulting engineer, 47, O'Connell-st., Limerick. Dep. £15 15s.

Hemel Hempstead T.C.—Making-up of Ebberns-rd. A. Murray-Smith, B.E. Dep. £2 2s.

Inverness C.C.—Diversion at Bungalow Brae, nr. Foyers, on Dores-Foyers-Dalcrag-rd. R. Robertson, C.S., Inverness. Dep. £1.

Luton T.C.—Extension of surface-water sewer, Biscot-rd. J. W. Tomlinson, B.E. Dep. £2 2s.

NOVEMBER 18.

East Barnet U.D.C.—Making-up Greenhill Park (part) and unnamed road. C. M. Barnes, E. and S. Dep. £2 2s.

Essex C.C.—Reconstruction of London-Yarmouth trunk road No. 3, section IV, Margaretting to Widford. Robt. H. Buckley, C.S., Chelmsford. Dep. £5 5s.

Essex C.C.—Construction of Ingatestone By-pass. Robt. H. Buckley, C.S., Chelmsford. Dep. £5.

Haywards Heath.—Approximately 6 miles of 4 in. dia. cast-iron pipes for Mid-Sussex Joint Water Board. W. H. Ashmole, E., Boltro-rd., Haywards Heath.

Hornchurch U.D.C.—Reconstruction of Abbs Cross-ln. from Abbs Cross-gdns. to L.M.S. railway bridge. Thos. E. Spencer, Highway S.

NOVEMBER 19.

Cheadle and Gatley U.D.C.—Making-up Burnside-rd., Gatley; Hawthorn-rd. (part), Gatley; Elm-rd. (part), Gatley. J. Wrest, E. and S.

Manchester T.C.—Improvements of Crossacres-rd., Northern Etchells, from Brownley-rd., for distance of 300 yds. City E. Dep. £2 2s.

Manchester T.C.—Sewering, draining, paving (tarred macadam and concrete), flagging (artificial) and kerbing of roads on Peel Hall area, Wythenshawe. City E. Dep. £2 2s.

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Ruislip-Northwood U.D.C.—Making-up Highfield-cres., Northwood. H. R. Metcalfe, Council Offices, Northwood. Dep. £2.

Torquay T.C.—Resurfacing of various main roads with asphalt. B.E. Dep. £5 5s.

NOVEMBER 21.

Chesham U.D.C.—Extension of soil sewer in Asheridge-rd. F. T. Moss, S.

Dartford T.C.—Roads and sewers on Princes-rd. housing estate; and reconstruction of Hythe-st. from Suffolk-rd. to Victoria-rd. B.S. Dep. £2 2s. each.

Maidenhead T.C.—Reconstruction of Marlow-rd. C. T. Read, B.S. Dep. £2.

NOVEMBER 23.

Freebridge Lynn R.D.C.—Laying water mains, parish of North Wootton. G. W. Little, water inspector, St. James' Clubhouse-bldgs., King's Lynn.

NOVEMBER 26.

Breconshire C.C.—Reconstruction of section of Llanwrtyd Wells-Llandovery-rd. between Erwbeili and Bylchau Farms. J. M. Richards, C.S., Watton, Brecon. Dep. £10.

NOVEMBER 28.

Beddington and Wallington T.C.—Making-up of Lavington-rd. S. F. R. Carter, B.E. and S. Dep. £1 1s.

DECEMBER 31.

Devon C.C.—Construction of Totnes by-pass, westerly extensions. Andrew Warren, C.S., 18, Cathedral-cl., Exeter. Dep. £5 5s.

DECEMBER 1.

Greenwich B.C.—Forming and paving of Langton-way, extending from Delacourt-rd. to Vanbrugh-ter. B.E. and S.

Public Appointments.

NOVEMBER 7.

Rawtenstall T.C. (Lancs).—Architectural Assistant. T.C.

Walthamstow T.C.—Clerk of Works (Temp.). T.C.

NOVEMBER 8.

Berkshire C.C.—Draughtsmen (Temp.). County S., Reading.

***Birmingham T.C.**—Junior Draughtsman. Chief Education Officer, Margaret-st.

Cheshunt U.D.C.—Two Technical Assistants (Temp.). E. and S., Waltham Cross, Herts.

Southampton T.C.—Three Architectural Assistants. B.E.

NOVEMBER 9.

Farnborough U.D.C. (Hants).—Building Inspector. D. Stuart Jones.

NOVEMBER 10.

London County Council.—Quantity Surveyor (Temp.). Chief Engineer (Quote U.38/61), County Hall, Westminster Bridge, S.E.1.

Manchester T.C.—Clerk of Works. Director of Education.

York T.C.—Architectural Assistant (Temp.). City E.

NOVEMBER 11.

***Bootle T.C.**—Architectural Assistant; Engineering Assistant (Temp.), and General Building Foreman. B.E. and S.

NOVEMBER 12.

***Cornwall E.C.**—Assistant Master for Building and Allied Subjects. Principal, Dolcoath Technical School, Camborne.

Durham C.C.—Architectural Assistant (Temp.). Wm. J. Merrett, C.S.

NOVEMBER 14.

***Colchester T.C.**—Architectural Assistant. B.E.

Isle of Wight C.C.—Architectural Assistant (Temp.); Engineering Assistant and Clerk. S. Gregson (A.), Newport, I.W.

Southend-on-Sea T.C.—Landscape Draughtsman. Parks Superintendent.

Sutton and Cheam T.C.—Architectural Assistant. B.E. and S.

NOVEMBER 15.

Southampton T.C.—Architectural Assistant. B.E.

NOVEMBER 17.

Somerset C.C.—Architectural Assistant. R. O. Harris (A.), Taunton.

NOVEMBER 18.

***London.**—Civil Engineer. Chief Superintendent of Ordnance Factories, Royal Arsenal, S.E.18.

***Reigate T.C.**—Technical Assistant (Temp.). B.S.

NOVEMBER 19.

***Herefordshire C.C.** — Architectural Assistant. W. Usher (A.).

***London.**—Assistant Civil Engineers. Under-Secretary of State, Air Ministry (S.2. (c)), Adastral House, W.C.2.

NOVEMBER 21.

***Hayes and Harlington U.D.C.** — Architectural Assistant and Engineering Assistant. E. and S., Hayes, Middlesex.

***Portsmouth T.C.**—Senior Assistant. City Architect.

***Rochester T.C.**—Clerk of Works. Secretary.

***St. Helens T.C.**—Architectural Assistant. B. and Water E.

NOVEMBER 23.

***Somerset C.C.**—Assistant Quantity Surveyor (Temp.). R. O. Harris (A.), Taunton.

NO DATE.

***London.**—Quantity Surveyor. Under-Secretary of State, Air Ministry (W.9), Adastral House, W.C.2.

***London.**—Architectural and Engineering Assistants. Under-Secretary of State, Air Ministry, (W.9). Adastral House, Kingsway, W.C.2.

***London (H.M.O.W.).**—Assistants (Temp.). Chief Maintenance S. (B.1), Room 65d, Third Floor, Storey's Gate, S.W.1.

CURRENT AND PROPOSED BUILDING WORK*

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Where business representatives cannot be seen personally at this stage, this should be mentioned. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Wednesday morning.

Bermondsey.—B.C. approved drainage plans: George Newton & Hill, 93, Southwark Bridge-rd., for L.C.C., alterations and additions to school, Galleywall-rd. school; W. E. Baker, General Manager, for B.C., A.R.P. treatment centre, Neckinger depot stables, and tenements, Arnolds-pl., blocks 6 and 7.

Blackpool.—C.B. approved:—Density plan from T. Smith, in connection with development of land on All Hallows-rd. estate; density plan, from R. Fielding & Son, in connection with development of land in Leyburn-av. and Beaufort-av.; warehouse and office, Talbot-rd. and Victory-rd., Irving and Co.; Mrs. E. Arnold, 401, Promenade, shops and flats.

Brantham.—River Stour (Essex and Suffolk) Catchment Board to undertake Sudbury to Brantham and Estuary improvement schemes. Cost £46,000.

Carshalton.—U.D.C. to re-advertise for 10 houses in St. Andrew's-rd. and Green Wrythe-ln.

Chesterfield.—T.C. approved: 38 houses, Orchardsway, for I. D. Wilcockson; clinic, Emund-st. and Racecourse-rd., for E.C.

Chichester.—Plans approved by City Bench: Rebuilding of "Unicorn Inn," Eastgate-sq., Chichester, for J. E. Whitehead, architect and estate agent, South-st., Chichester.

Coventry.—New Church of St. George's Radford now being erected. Architect, N. F. Cachemaille-Day (F.), London.

Cranbrook (Kent).—R.D.C. approved: Proposed lay-out for 28 houses at top of High-st., Cranbrook, for A. J. Glock.

Dartford.—R.D.C. approved: Courage & Co., Anchor Brewhouse, S.E.1, boiler house, "The Malt and Shovel," Eynsford; H.M.O.W., Horseferry-rd., S.W.1, Springhead repeater station, Watling-st.

Derry.—Management Committee of City and County Mental Hospital Committee passed scheme for additional building at Gransha institution, at £25,000.

Dewsbury.—Dewsbury Management Committee of Rugby Club propose new dressing-rooms and club premises, at between £3,000 and £4,000.

Chester.—T.C. approved:—Offices and garage, Station-rd., Dee Mineral Water Co.; alterations to offices at Westminster-bldgs., Newgate-st., Tarvin R.D.C.

Greenwich.—B.C. approved:—Factory on new road between Woolwich-rd. and Westmoor-st.; shops and flats, 118-140, Trafalgar-rd.; maisonnettes or flats, 31, Beaconsfield-rd.; shops and maisonnettes, corner of Bramshot-av. and Invicta-rd.; tyre depot, corner of Greenwich-rd., Egerton-rd. and Ashburnham-rd.; 2 blocks of cottages, Bellot-st.; 3 blocks of flats, Blackwall-ln.—Drainage plans passed:—Johns Bros., Ltd., Claremont-st., N. Woolwich, at Bestall Furniture Co.'s warehouse, new road out of Woolwich-rd. into Eastmoor-st.; Rowley Bros., Ltd., Dunloe-av., N.17, for L.C.C., at blocks of flats forming part of Eastney-st. area; W. G. Gregory, Millbank, S.W.1, for Sisters of the Assumption, at Convent, corner of Charlton-rd. and Bramhope-ln.; Kidbrooke Park Estates, Ltd., Shooters Hill-rd., Blackheath, at 151 houses, being 111 in new road south of Wricklemarsh-rd. and 40 in Correlli-rd.; V. W. Hindwood, 1, Charlton-rd., Charlton, at 49 houses, Charlton Heights estate.

Keighley.—T.C. approved plans for new second-class swimming bath, to cost £35,000.

Leamington Spa.—T.C. approved: 32 semi-detached houses with garages, Burns-rd., for Warley Buildings, Ltd.; 62 semi-detached houses, roads 4 and 5, Shrubland Hall estate, Leamington Spa Estates, Ltd.

Leyland. — Catholic school with accommodation for 200 senior scholars on Fox-la., for Rev. S. A. Parker, M.A., P.P., St. Mary's, Town Gate and Catholic Authorities. Cost £15,000. Architect, W. C. Mangan (L.), 18, Guildhall-st., Preston.

Liverpool.—Peter Walker & Son (Warrington and Burton), Ltd., Duke-st., propose rebuilding "Brown Cow" hotel, Palmer-st. A. E. Shennan, architect, North House, North John-st.—Bent's Brewery Co., Ltd., 30, Johnson-st., propose hotel, Greenhill-rd. Architect, A. E. Shennan, 17, North John-st.

Liverpool.—City Council agreed to sale of land west side of Stopgate-ln., Fazakerley, to Bradley's (Chester), Ltd., for erection of factory.

Liverpool.—Bent's Brewery Co., Ltd., 30, Johnson-st., propose licensed premises, Beaumont-st. Architect, A. E. Shennan (F.), 17, North John-st.—W. & T. Avery, Ltd., Soho Foundry, Birmingham, propose premises, Great Crosshall-st., Fontenoy-st. and Primrose-hill.—Managers of St. Margaret's School, Princess-rd., propose additions to premises. Architects, Biram & Fletcher (FF.), 17, George-st., St. Helens.

London (M.W.B.).—Board to consider proposals which Works and Stores Committee are submitting that powers be sought in a proposed Bill to construct works in Kent district and acquire certain strips of lands alongside the New River, etc.

Lowestoft.—T.C. approved:—Warnes & Son, 24 houses, Mount Pleasant.

Meriden.—R.D.C. approved: 2 pavilions, Coleshill-rd., Coleshill, City of Birmingham; pair semi-detached bungalows, 4 pairs semi-detached and 2 3-block dwelling-houses, Marsh-ln., Hampton-in-Arden, R.D.C.; cinema, Chester-rd., Castle Bromwich, H. Dare.

Manchester.—Rev. V. O'Shaughnessy and R. C. Managers proposing senior school for 640 at Higher Openshaw. Plans by F. M. Reynolds, for Hill, Sandy & Norris, 9, Albert-sq.

Merton and Morden.—U.D.C. approved: Dean's Rag Book Co., store at High Path; G. T. Crouch, Ltd., 10 houses, Seymour-av., junction with Kingsbridge-rd., and 4 blocks, each of 4 houses, in lieu of 8 blocks of semi-detached houses, Seymour-av.

Middlesex.—C.C. approved widening of Boston-rd. between Uxbridge-rd. and Elthorne-av., at £84,570.

Newton Abbot.—U.D.C. approved: Offices, etc., Kingsteignton-rd., executors of late A. A. Knight; electricity testing department at Newton Abbot, for Torquay Electricity Undertaking.

North Shields.—Thomas Hanning and Partners, 2, Collingwood-st., Newcastle, engineers for reinforced concrete deep water quay to be constructed for Smiths Dock Co., Ltd.—Tyne Improvement Commission propose to remodel their Coble Dene yard near North Shields, at £18,000. R. F. Hindmarsh, T.I.C. Offices, Bewick-st., Newcastle, engineer.

Nottingham. — Frank Goulding, Ltd., builders, Beauvale-rd., propose 116 houses, Runswick-dr., Wollaton-rd., Wollaton.

Nottingham.—W. V. Betts & Sons, architects, 2, St. Peter's Church-walk, preparing plans for extensions to central premises, Parliament-st. and Wollaton-st., for Nottingham Co-operative Society, Ltd., Upper Parliament-st., also for boot repairing factory at Meadow-ln. Tenders invited.

Oxford.—Wessex Electricity Co., Ltd., 37a, St. Giles-st., to make extensions and alterations to stores and garages, Temple-rd., Cowley. Architects, Farmer & Dark (FF.), 87, Buckingham Palace-rd., S.W.1. No contracts let.

Poplar. — B.C. approved:— W. Loweth & Sons, Ltd., 67, Downs Park-rd., Hackney, E.8, additions to "Queen Victoria" p.-h., St. Leonard's-st, E.3; R. Woollaston & Co., 40, Turners-rd., Bow, E.3, alterations to 213-217, Bow-rd.; J. Westwood & Co., Ltd., Napier-yd., West Ferry-rd., E.14, workshop, West Ferry-rd.; Stuart's Granolithic Co., Ltd., 101, Baker-st., W.1, extension of works, Glengall-gr.; Hooper, Cushen & Co., Millwall, E.14, engineering workshop at 6-11, Cuba-st., and 15-21, Manilla-st.; Hammond & Miles, Ltd., Scrafton-rd. Works, Ilford-la., Ilford, new office at 239, Old Ford-rd.

Port Talbot.—Tom Gibb, Station-rd., Port Talbot, architect for hall and institute to be erected in Talbot-rd., for Trustees of Y.M.C.A. Cost, approximately £8,000.

Preston.—T.C. approved:—J. Miller, per Hawthorne Bros., Ltd., 29 houses, Kay-st. Mill estate.

Ramsgate.—T.C. approved plans for St. Mark's Church hall, Pyson's-rd.

Rawtenstall.—T.C. approved:—Showroom, Bank-st., Rawtenstall, Rossendale Union Gas Co.

Reigate.—T.C. approved:—46 flats in 12 blocks of maisonnettes, Kingsley-gr. and Meadow-way, Woodhatch estate, for Davis Estates, Ltd.

Romsay and Stockbridge.—R.D.C. approved: Hamtun Estates, Ltd., 24 houses, Mousehole-ln., Millbrook.

Rugby.—Governors of Murray School propose rebuilding Murray School, at £12,000. Architect, W. T. Loveday, 2a, Lawrence Sheriffe-st.

Salford.—E.C. to borrow £27,700 for new elementary school at Lancaster-rd., Pendleton.—Percy Howard (A.), Manchester, architect for proposed school on site of Sussex-st. school and chapel, Lower Broughton. Cost £18,900.

Scarborough.—Warehouse and cottages proposed in Clark-st., for C. Westall. Architects, Wilkinson & Smith, Queen-st.—A. J. Thraves, Briars-la., Nottingham, architects for proposed holiday camp, to cost about £120,000.

Shoeburyness.—The R.C. Church proposes new St. George's Church, etc., Ness-rd. and St. Andrew's-rd. Plans by T. H. B. Scott (F.), 110, Horseferry-rd., S.W.1. No contracts let.

Sittingbourne.—U.D.C. approved: Revised lay-out of Chapel Orchard estate, 22 houses, Chapel Orchard estate, G. Hyland.

Smethwick.—T.C. to erect an equal number of parlour and non-parlour type houses, with garages at rear, at Abbey-rd. Tenders to be invited.

Southampton.—C.B. approved:—Fox & Sons, Davis Estates, Ltd., 28 maisonnettes, Vale-dr.; P. J. Newby Vincent, per Strong & Co., of Romsey, Ltd., public-house, "The Waterman's Arms," High-st.; A. J. Seal & Pinrs., per Edwin Jones & Co., Ltd., 10 garages and stores, etc., York-bldgs and Hanover-bldgs.

Southwark.—B.C. approved:—Co-operative Wholesale Society, Ltd., 99, Leman-st., E.1, cold stores, Foundry Wharf, Hopton-st., S.E.1; B.E. extension to Penrose-st. garage.

South Shields.—Scarborough Spa Hotel to be rebuilt for A. Deuchar, Ltd., brewers, Newcastle. T. A. Page, Son & Bradbury, 75, King-st., architects.

Stafford. — T.C. approved plans:—48 houses, Holmcroft estate, West Heath Estates, Ltd., 31a, Gaolgate-st.

Stockton-on-Tees.—Architect for extensions to St. Bede's boys' school is A. Harrison, 69, High-st.—Scheme for new C. of E. school, Darlington-rd., prepared by Milner and Craze, Racquet-court, London, E.C.4.

Stoke Newington.—B.C. approved: Howes & Jackman, additional drainage to staff quarters at Church-st. depot; Howes & Jackman, drainage work at Hewling-st. flats; site of 79-83, Lordship-rd., maternity hospital.

Stoke-on-Trent.—T.C. approved:—C. Sutton, Turnhurst-rd., Packmoor, 76 houses; Holt Brewery Co., Greenbank-rd., Tunstall, licensed premises; Burslem and District Co-operative Society, Milton-rd., Sneyd Green, shop premises; F. Myatt, Ltd., Werrington-rd., Townsend, licensed premises; F. C. Gibson, Willow-gr., off Blurton-rd., Blurton, 30 houses; A. Bates, off Whieldon-rd., Fenton, 36 houses.

Stourbridge.—Webb & Gray, architects, 200, High-st., Dudley, for extensions to King Edward VI grammar school. Cost, £18,419.

Stretford.—T.C. propose central fire station and general lay-out, subject to Urmston U.D.C. approval of plans. Application to be made to M.H. to borrowing £28,226.—Plans passed: Sports pavilion, off Sandy-ln., T. French & Sons, Ltd.; showrooms and offices, Upper Chorlton-rd., Bracegirdle Motor Co., Ltd.; motor service station and offices, Chester-rd., S. Smith & Sons (Motor Accessories), Ltd.; factory, Brixham-rd., Alpha Margarine Co.

Sunderland.—T. Clegg, Westwood-st., promoter of plan for mineral water factory on Pallion estate, to be built by North-Eastern Trading Estates, Ltd., to plans by W. and T. R. Milburn, 17, Fawcett-st.

Tynemouth.—Golf club proposes clubhouse.

Wandsworth.—B.C. approved interim development proposals: Mitcham-rd., Tooting, rebuilding of Nos. 55-57; Old Devonshire-rd., Balham, office and showroom; Leigham Court-rd., Streatham, block of flats on site of No. 149; Upper Richmond-rd. and Balmuir-gdns., Putney, block of residential chambers with a central dining-room; Totterdown-st., Tooting, shop premises with flats over, and a range of 6 lock-up garages at rear, on site of No. 20; Leigham Court-rd., Streatham, extension to the Dene Hotel; South Side, Clapham Common, rebuilding of Fleming's garage; Point Pleasant, Southfields, office building; Streatham High-rd., extension to Nos. 148-154; Factory-sq., Streatham, extensions to factory of P. B. Cow & Co.; Balham High-rd., 27 lock-up garages at No. 325; Woodleigh-gdns., Streatham, maisonettes; Mitcham-rd., Tooting, rebuilding of Nos. 187-191; Wimbledon Park-rd., Southfields, block of flats at Nos. 264-310; Garratt-ln., Springfield, block of flats on site of No. 857, Oakhill-rd., Putney, 5-storey block of 35 flats, with garages at basement level, on site No. 1; Buckhold-rd., Southfields—1-storey factory and 2-storey office block at premises of Thomas Potterton; Clapham-rd., Clapham North, flats and garages on site of Nos. 384-404; Garratt-ln., Fairfield, 2-storey factory extension at No. 100; Putney High-st., reconstruction of Nos. 96-98a; Wimbledon Park-rd., Southfields, 3-storey block of flats on site on north-western side; Wandsworth Plain, Southfields, rebuilding part of "The Crane" p.h. and extension of premises; Wandsworth High-st., Fairfield, rebuilding of "King's Arms" p.h. (No. 96); Upper Richmond-rd., Putney, 50 lock-up garages on site adjoining No. 84; South Side, Clapham Common, 4-storey extension at rear of "Montrose Court" hotel; Streatham High-rd. and Gracefield-gdns., Streatham, multi-storey garage building with shops or showrooms in ground storey, and a petroleum filling station; York-rd. and Shoreham-st., Fairfield, air-raid precautions training centre on site at junction; Putney-hill, additions to restaurant buildings at Manor Fields; Kimber-rd., Southfields, 1-storey extension at premises of Metropolitan Dyers & Cleaners, Ltd.; Wandsworth-rd., Clapham North, rebuilding of Nos. 360 and 362.—Plans passed: H. Wakefield & Sons, 27 garages at rear 322-324, Balham High-rd.; C. H. Rumalls & Sons, Ltd., alterations and additions to Franciscan-rd. school, Franciscan-rd.; L. H. Wilson (Builders), Ltd., factory and offices, northern side of Buckhold-rd.; C. H. Gibson, Ltd., rebuilding "The Hope" p.h., Nursery-st.; Henry Kent (Builders), Ltd., branch store, 13, Streatham High-rd.

Wardley.—Miners' hall to be built at Wardley Colliery. Architect, W. Stockdale, Howard-st., North Shields.

Warrington.—Greenwood Bros., Ellen-st., propose 62 houses, Crosby and Charter-avs. Architects, Pierpoint & Worthington, 31, King-st., Wigan.

Whitley Bay.—Plans being prepared by Mayoh, Sworder & Co., Victoria-st., London, for £200,000 pier at Whitley Bay, for North-Eastern Piers, Ltd.

Wood Green.—B.C. to make application to M.H. for £92,119 for new municipal offices and petty sessional courts.—Plans passed:—M. T. Tudsbery, for B.B.C., alterations to existing offices at television studios, Alexandra Palace; Alexandra Park Trustees, conversion of Bijou Theatre at Alexandra Palace into offices and a flat.

Woolwich.—B.C. approved:—John Dalton, 46-47, New Broad-st., E.C.2 (on behalf of West Kent Electric Co., Ltd.), Clesco sports ground, Footscray-rd., Eltham, alterations and additions to sports pavilion; H. W. Tee, for B.C., Callis-alley, Woolwich, decontamination centre at highways depot; Wright & Renny, 1 and 3, Powis-st., Woolwich, houses and garages, Chapel Farm estate, Eltham.

Worcester.—G.W.R. Co. to carry out alterations and improvements at Foregate-st. station.

Worthing.—The Sussex Territorial Army and Air Force Association, Marine-parade, Brighton, to acquire site in Upper Brighton-rd. for drill hall and anti-aircraft headquarters. Architects, Clayton & Black, 10, Prince Albert-rd., Brighton.

Worthing.—T.C. approved:—West Sussex Coast Development Co., Ltd., 24 houses and garages to front Bury-dr.; Potter & Trower, for Woodwards, 3 blocks of flats and 3 lock-up garages to front Wallace-av. and Anscombe-rd.

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*See also List of Contracts Open.

****In these lists every care is taken to ensure that information given is accurate and up to date, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. List of abbreviations on page 898.**

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1938.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Crafts-men.	Lab-ourers.
Aberavon	1/7½	1/2¾
Aberdare	1/7	1/2½
Abergavenny	1/7	1/2½
Abingdon	1/6	1/1½
Accrington	1/7½	1/2¾
Aldeburgh	1/3½	11¾
Aldershot	1/5½	1/1½
Alfreton	1/7½	1/2¾
Alnwick	1/7	1/2½
Altrincham	1/7½	1/2¾
Amble	1/7	1/2½
Amersham	1/6	1/1¾
Ammanford	1/7½	1/2¾
Andover	1/5½	1/1½
Ardingley	1/5½	1/1½
Arundel	1/5½	1/1½
Ascot	1/5½	1/1½
Ashby-de-la-Zouch	1/6	1/1½
Ashford (Kent)	1/5	1/0¾
Ashford (Middlesex)	1/7½	1/2¾
Ashington	1/7	1/2½
Ashtead	1/7½	1/2¾
Ashton-under-Lyne	1/7½	1/2¾
Aylesbury	1/5¾	1/1½
Aylsham	1/4½	1/0½
Bagshot	1/5½	1/1½
Banbury	1/5½	1/1½
Barnsley	1/7¾	1/2¾
Barnstaple	1/5½	1/1½
Barrow-in-Furness	1/7½	1/2¾
Barry	1/7½	1/2¾
Basingstoke	1/5½	1/1½
Bath	1/6½	1/2
Batley	1/7½	1/2¾
Beaconsfield	1/6	1/1½
Beccles	1/4	1/0
Bedford	1/6½	1/2
Berkhamsted	1/5	1/0¾
Berwick	1/7	1/2½
Beverley	1/7½	1/2¾
Bexhill-on-Sea	1/5½	1/1½
Bideford	1/5½	1/1½
Biggleswade	1/5	1/0¾
Billericay	1/5	1/0¾
Birchington	1/5	1/0¾
Birkenhead	‡§1/9½	¶
Birmingham	1/7½	1/2¾
Bishop Auckland	1/7½	1/2¾
Bishops Stortford	1/6	1/1½
Blackburn	1/7½	1/2¾
Blackpool	1/7½	1/2¾
Blyth	1/7½	1/2¾
Bognor Regis	1/5½	1/1½
Bolton	1/7½	1/2¾
Bournemouth	1/6½	1/2
Bracknell	1/5½	1/1¾
Bradford	1/7½	1/2¾
Bradford-on-Avon	1/4½*	1/0½
Braintree	1/5½	1/1½
Brentwood	1/7	1/2¼
Bridgwater	1/5½	1/1½
Bridlington	1/7	1/2¼
Brighouse	1/7½	1/2¾
Brighton	1/6¾	1/2
Bristol	1/7½	1/2¾
Broadstairs	1/5	1/0¾
Bromsgrove	1/6½	1/2
Buckley	1/7½	1/2¾
Bungay	1/3½	11¾
Burnham-on-Crouch	1/4	1/0
Burnley	1/7½	1/2¾
Burslem	1/7½	1/2¾
Burton-onTrent	1/7½	1/2¾
Bury	1/7½	1/2¾
Bury St. Edmunds	1/5	1/0¾
Buxton	1/7	1/2¼
Byfleet	1/6	1/1½
Cambridge	1/7	1/2½
Canterbury	1/5	1/0¾
Cardiff	1/7½	1/2¾
Carlisle	1/7½	1/2¾
Carnforth	1/7½	1/2¾
Castleford	1/7½	1/2¾
Caterham	1/7½	1/2¾
Chard	1/4½*	1/0½
Chatham	1/6	1/1½
Chelmsford	1/6	1/1½
Cheltenham	1/6½	1/2
Chepstow	1/6½	1/2
Chertsey	1/6½	1/2
Chester	1/7½	1/2¾
Chesterfield	1/7½	1/2¾
Chichester	1/5½	1/1½
Chorley	1/7½	1/2¾
Cirencester	1/5*	1/0¾
Clacton	1/5½	1/1½
Cleveleys	1/7½	1/2¾
Clitheroe	1/7½	1/2½
Cobham (Surrey)	1/6½	1/2
Colchester	1/6½	1/2
Colwyn Bay	1/6½	1/2
Congleton	1/7	1/2½
Coventry	1/7½	1/2¾
Cranbrook	1/5	1/0¾
Cranleigh	1/5½	1/1½
Crawley	1/5½	1/1½
Crewe	1/6½	1/2
Cromer	1/4½	1/0½
Crowborough	1/5½	1/1½
Cuckfield	1/5½	1/1½
Darlington	1/7½	1/2¾
Darwen	1/7½	1/2¾
Daventry	1/6	1/1½
Deal	1/5	1/0¾
Denbigh	1/6	1/1½
Derby	1/7½	1/2¾
Devizes	1/1*	1/0
Dewsbury	1/7½	1/2¾
Didcot	1/5½	1/1½
Diss	1/4	1/0
Doncaster	1/7½	1/2¾
Dorchester	1/5*	1/0¾
Dorking	1/6	1/1½
Dover	1/5	1/0¾
Dovercourt	1/5½	1/1½
Driffield	1/6	1/1½
Droitwich	1/6½	1/2
Dudley	1/7½	1/2¾
Dunstable	1/5½	1/1½
Durham City	1/7½	1/2¾
Eastbourne	1/6½	1/2
E.Glam. (Mon. Val.)	1/7	1/2½
East Grinstead	1/5½	1/1½
Edenbridge	1/5½	1/1½
Ely	1/4	1/0
Epping	1/7½	1/2¾
Exeter	1/6½†	1/2
Exmouth	1/5½	1/1½
Fakenham	1/4	1/0
Falmouth	1/6	1/1½
Fareham	1/6½	1/2
Faversham	1/5	1/0¾
Felixstowe	1/6	1/1½
Filey	1/6	1/1½
Fleetwood	1/7½	1/2¾
Flint	1/7	1/2½
Folkestone	1/5	1/0¾
Frinton-on-Sea	1/5½	1/1½
Frome	1/4½*	1/0¾
Gainsborough	1/6½	1/2
Gateshead	1/7½	1/2¾
Gillingham (Kent)	1/6	1/1½
Glossop	1/7½	1/2¾
Gloucester	1/6½†	1/2
Godalming	1/5½	1/1½
Goole	1/7½	1/2¾
Gosport	1/6½	1/2
Grantham	1/6½	1/2
Gravesend	1/7	1/2½
Great Yarmouth	1/5½	1/1½
Grimsby	1/7½	1/2¾
Guildford	1/5½	1/1½
Guilsborough	1/6	1/1½
Halifax	1/7½	1/2¾
Hanley	1/7½	1/2¾
Harpenden	1/6	1/1½
Harrogate	1/7½	1/2¾
Hartlepools	1/7½	1/2¾
Harwich	1/5½	1/1½
Haslemere	1/5½	1/1½
Hastings	1/5½	1/1½
Hatfield	1/6½	1/2
Haywards Heath	1/5½	1/1½
Hednesford	1/7	1/2½
Hemel Hempstead	1/6½	1/2
Henley-on-Thames	1/5½	1/1½
Hereford	1/5½*	1/1½
Herne Bay	1/5	1/0¾
Hertford	1/6½	1/2
Heysham	1/7½	1/2¾
Hitchin	1/6	1/1½
Hoddesdon	1/6½	1/2
Holt (Norfolk)	1/3½	11¾
Horley	1/5½	1/1½
Horsham	1/5½	1/1½
Horwich	1/7½	1/2¾
Huddersfield	1/7½	1/2¾
Hull	1/7½	1/2¾
Hunstanton	1/4	1/0
Huntingdon	1/4½	1/0½
Ilfracombe	1/5½	1/1½
Ingatestone	1/5½	1/1½
Ipswich	1/6½	1/2
Isle of Thanet	1/5	1/0¾
Isle of Wight	1/4½	1/0½
Keighley	1/7½	1/2¾
Kenilworth	1/7½	1/2¾
Kettering	1/7	1/2½
Kidderminster	1/6½	1/2
King's Lynn	1/5	1/0¾
Kirkham	1/7½	1/2¾
Knowle	1/7	1/2½
Lancaster	1/7½	1/2¾
Leamington	1/7½	1/2¾
Leatherhead	1/6½	1/2
Leeds	1/7½	1/2¾
Leicester	1/7½	1/2¾
Leighton Buzzard	1/4½	1/0½
Letchworth	1/6	1/1½
Lewes	1/5½	1/1½
Lichfield	1/6½	1/2
Lincoln	1/7½	1/2¾
Littlehampton	1/5½	1/1½
Liverpool	‡§1/9½	¶
Llandudno	1/6½	1/2
Llanelly	1/7½	1/2¾
London—		
12 m. radius	1/9*	1/3¾
12-15 m. radius	1/8½*	1/3½
Long Eaton	1/7½	1/2¾
Longton	1/7½	1/2¾
Loughborough	1/7½	1/2¾
Louth	1/6	1/1½
Lowestoft	1/5½	1/1½
Luton	1/7	1/2½
Macclesfield	1/7	1/2½
Maidenhead	1/6	1/1½
Maidstone	1/6	1/1½
Malvern	1/6	1/1½
Manchester	1/7½	1/2¾
Manningtree	1/4	1/0
Mansfield	1/7½	1/2¾
March	1/4½	1/0½
Margate	1/5	1/0¾
Market Harborough	1/6½	1/2
Matlock	1/6	1/1½
Melton Constable	1/3½	11¾
Melton Mowbray	1/6½	1/2
Merthyr Tydfil	1/7	1/2½
Middlesbrough	1/7½	1/2¾
Middleton	1/7½	1/2¾
Middlewich	1/6½	1/2
Milford Haven	1/5½	1/1½
Morecambe	1/7½	1/2¾
Morley	1/7½	1/2¾
Mundesley	1/4½	1/0½
Nantwich	1/6½	1/2
Nelson	1/7½	1/2¾
Newark-on-Trent	1/6½	1/2
Newbury	1/5½	1/1½
Newcastle-on-Tyne	1/7½	1/2¾
Newcastle-u-Lyme	1/7½	1/2¾
New Forest	1/4½	1/0½
Newmarket	1/5½	1/1½
Newport, Mon.	1/7½	1/2¾
Newport Pagnell	1/5½	1/1½
Northampton	1/7½	1/2¾
Norwich	1/7½	1/2¾
Nottingham	1/7½	1/2¾
Nuneaton	1/7½	1/2¾
Oakham	1/6	1/1½
Oldham	1/7½	1/2¾
Ormskirk	1/7½	1/2¾
Oxford	1/7	1/2½
Oxted	1/6	1/1½
Paignton	1/7	1/2½
Peterborough	1/7	1/2½
Plymouth	1/7½	1/2¾
Pontefract	1/7½	1/2¾
Pontypridd	1/7	1/2½
Portsmouth	1/6½	1/2
Port Talbot	1/7½	1/2¾
Preston	1/7½	1/2¾
Pulborough	1/5½	1/1½
Ramsgate	1/5	1/0¾
Reading	1/6½	1/2
Redditch (Northern)	1/6½	1/2
Redhill	1/6	1/1½
Reigate	1/6	1/1½
Retford	1/6	1/1½
Rickmansworth	1/7	1/2½
Ripon	1/6	1/1½
Rochdale	1/7½	1/2¾
Rochester	1/6	1/1½
Rugby	1/7½	1/2¾
Saffron Walden	1/4	1/0
St. Albans	1/7	1/2½
St. Helens	1/7½	1/2¾
St. Neots	1/4½	1/0½
Salisbury City	1/4½*	1/0½
Salisbury Plain	1/5½*	1/1½
Sawbridgeworth	1/5½	1/1½
Saxmundham	1/3½	11½
Scarborough	1/7	1/2½
Scunthorpe	1/7½	1/2¾
Selby	1/7½	1/2¾
Sevenoaks	1/6	1/1½
Sheerness	1/5	1/0¾
Sheffield	1/7½	1/2¾
Shipley	1/7½	1/2¾
Shoeburyness	1/7	1/2½
Shoreham	1/6½	1/2
Shrewsbury	1/6½	1/2
Sittingbourne	1/5	1/0¾
Skegness	1/6½	1/2
Sleaford	1/6	1/1½
Slough	1/6½	1/2
Southampton	1/7	1/2½
Southend-on-Sea	1/7	1/2½
Southport	1/7½	1/2¾
South Shields	1/7½	1/2¾
Spalding	1/5½	1/1½
Stafford	1/7	1/2½
Staines	1/6½	1/2
Stamford	1/6½	1/2
Stevenage	1/6	1/1½
Stockport	1/7½	1/2¾
Stockton-on-Tees	1/7½	1/2¾
Stoke-on-Trent	1/7½	1/2¾
Stourbridge	1/7	1/2½
Stourport	1/6½	1/2
Stowmarket	1/4	1/0
Stratford-on-Avon	1/6	1/1½
Stroud	1/6†	1/1¾
Sunderland	1/7½	1/2¾
Sutton Coldfield	1/7½	1/2¾
Swaffham	1/3½	11¾
Swanage	1/5½*	1/1¾
Swansea	1/7½	1/2¾
Swindon	1/6*	1/1½
Tamworth	1/7	1/2½
Taunton	1/5½	1/1¾
Tenterden	1/5	1/0¾
Thames Haven	1/7½	1/2¾
Thetford	1/4	1/0
Thorpe Bay	1/7	1/2½
Todmorden	1/7½	1/2¾
Tonbridge	1/6	1/1½
Torquay	1/7	1/2½
Totnes	1/5½	1/1½
Trowbridge	1/4½*	1/0½
Truro	1/4½	1/0½
Tunbridge Wells	1/6	1/1½
Uppingham	1/6	1/1½
Uttoxeter	1/6	1/1½
Wakefield	1/7½	1/2¾
Walsall	1/7½	1/2¾
Walsden	1/7½	1/2¾
Walton-on-Naze	1/5½	1/1¾
Ware	1/6½	1/2
Warminster	1/4½*	1/0½
Warrington	1/7½	1/2¾
Warwick	1/7½	1/2¾
Wellingborough	1/7	1/2½
Wells (Norfolk)	1/3½	11¾
Welwyn	1/6½	1/2
Welwyn Gar. City	1/7½	1/2¾
West Bromwich	1/7½	1/2¾
Westcliff-on-Sea	1/7	1/2½
Weston-super-Mare	1/6½	1/2
Weybridge	1/6½	1/2
Weymouth	1/5*	1/0¾
Whitby	1/6½	1/2
Whitstable	1/5	1/0¾
Widnes	1/7½	1/2¾
Wigan	1/7½	1/2¾
Wigton	1/6	1/1½
Willington	1/7	1/2½
Wilmslow	1/7½	1/2¾
Winchester	1/5½	1/1¾
Windermere	1/6	1/1½
Windsor	1/6½	1/2
Wisbech	1/4½	1/0½
Witham	1/5½	1/1¾
Woking	1/6	1/1½
Wokingham	1/5½	1/1¾
Wolverhampton	1/7½	1/2¾
Woodbridge	1/4½	1/0½
Worcester	1/7	1/2½
Workington	1/6½	1/1½
Worksop	1/6	1/2
Worthing	1/5½	1/1¾
Wrexham	1/7	1/2½
Wroxham	1/5	1/0¾
Wycombe	1/6	1/1½
Wymondham	1/4	1/0
Yeovil	1/5½	1/1¾
York	1/7½	1/2¾

* Painters 1d. less than other Craftsmen. † Painters ½d. less than other Craftsmen. ‡ Plasterers 1/10

¶ Tradesmen's Labourers 1/4½. Navvies and General Labourers 1/3½

§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money

For Building Trade Wages in Scotland see page 906.

CURRENT PRICES FOR BUILDING WORK IN LONDON.

Note.—These prices apply to new buildings only. They cover superintendence by foreman and carry a profit of 10 per cent. on the prime cost, without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts, and from 1s. 6d. per £100 Fire Insurance. The whole of the information given is copyright.

PRELIMINARIES.		£	s.	d.
Hoardings, with suitable gate, 8 ft. high	per ft. run	0	3	0
Steel scaffolding for brickwork	per sqre.	1	5	0
Steel scaffolding for stone building	,,	1	10	0
Steel gantry for stone building	per ft. run	2	10	0
Office, shed for cement and mess-room	say	75	0	0
EXCAVATOR.				
Digging, throwing out and filling into carts and carting to shoot, 5 ft. deep	per yd. cube	0	7	9
Add if stiff clay	,,	0	1	0
Add for every additional 5 ft.	,,	0	0	6
Add if in trenches	,,	0	0	9
Add to price of digging for breaking up concrete foundation and brickwork	,,	0	10	0
Return, fill and ram	,,	0	1	9
Fill into carts and cart away	,,	0	3	6
Planking and strutting to trenches	per ft. super	0	0	3½
Planking and strutting to sides of basement excavation next roadway	,,	0	1	4
Needling, flying and raking shores and removing after and carting away	per ft. cube	0	6	9
CONCRETOR.				
Portland cement and ballast concrete 1-6 in. foundations	per yd. cube	1	2	0
Add in underpinning in short lengths	,, ,,	0	6	0
Concrete in floors, ¾ in. aggregate, and sand, 1-2-4—				
4 in. thick	per yd. super	0	3	4
6 in. thick	,, ,,	0	4	8
Add if trowelled smooth	,, ,,	0	0	9
Add for hoisting, each floor	,, ,,	0	0	3
Concrete 1-2-4 in. beams and stanchions	per ft. cube	0	1	4
Concrete in lintols, with steel rod reinforcement each 4½ in. width and shuttering	,, ,,	0	4	0
1½ in. centering, with stout supports for concrete floors	per square	2	2	0
Do. to sides and soffites of beams	per ft. super	0	0	8
Do. to sides of stanchions	,, ,,	0	0	7
Steel rod reinforcement under ⅝ in. diameter, cut, bent and placed in position	per cwt.	1	8	0
Do. do. over ⅝ in. diameter	,,	1	5	0
BRICKWORK.				
Reduced to 1½ brick in flettons, lime mortar	per rod	26	0	0
Add for 2nd hard stocks	,,	8	0	0
Add for Blue Staffordshire	,,	22	0	0
Add to above if in 1-4 cement	,,	0	15	0
Add if in backing to stonework	,,	1	5	0
Add if in underpinning in cement	,,	4	10	0
Add if above 40 ft. to 60 ft. high	,,	2	0	0
SUNDRIES.				
Damp course in double course of slates, breaking joint	per ft. super	0	0	11
Vertical do. do.	,,	0	1	2
Bitumastic	,,	0	0	5
Lead core	,,	0	0	10
Cut, tooth and bond new to old brickwork	,,	0	1	0
Rake out joints of brickwork	,,	0	0	1
Leave chase for concrete floor	per ft. run	0	0	2
Cut chase 4½ in. deep for concrete floor	,,	0	1	2
Leave chase for vertical pipe	,,	0	0	4
Cut chase for vertical pipe	,,	0	1	4
Rake out joint for flashings and point	,,	0	0	2
Do. stepped do.	,,	0	0	4
Do. for asphalt skirting	,,	0	0	2
Build in ends of timbers	each	0	0	4
Do. steel joists up to 12 in. deep	,,	0	0	6
Do. step and make good facings	,,	0	1	6
Set and flaunch chimney pots	,,	0	7	6
Render fire openings	,,	0	2	0
Bed and point door frames one side	,,	0	3	0
Do. both sides	,,	0	4	6
Do. window frames, one side	,,	0	4	0
Setting only register grate	,,	1	0	0
Do. interior hearths and mantles	,,	1	15	0
Do. kitchen range, large	,,	5	0	0
Fix air brick and form flue	,,	0	2	0
Cut holes for pipes and make good facings, 9 in. wall	,,	0	2	0
Do. do. 13½ in. wall	,,	0	2	6
Do. large pipes and do. 9 in. wall	,,	0	3	0
Do. do. 13½ in. wall	,,	0	3	6
FACINGS.				
Extra for facings in Flemish bond for each 10s. per thousand over the price of Flettons	per ft. super	0		1½
Pointing facings to approval	,,	0		3
Arches extra over Flettons in stocks	,,	0		8
Do. in reds	,,	1		0
Do rubbed and gauged in putty	,,	5		9

PARTITIONS.		£	s.	d.
2 in. breeze slab partitions in cement	per yd. super		4	0
3 in. do. do.	,,		4	6
2 in. hollow-tile do.	,,		4	9
3 in. do. do.	,,		5	6
PAVING.				
1 in. granolithic paving gauged 5—2	per yd. super		2	7
1½ in. do. do.	,,		2	11
1 in. × 6 in. covered skirting	per ft. run		0	10
ASPHALT (NATURAL).				
½ in. horizontal damp course	per ft. super		0	6
⅝ in. horizontal damp course	,,		0	8
¾ in. vertical do. in two layers	per yd. super		9	6
¾ in. in flats, two layers	,,		6	0
Angle fillet	per ft. run		0	3
6 in. skirting and angle fillet and jointing top edge	,,		1	0
DRAINAGE.				
Excavate, trench for drain and throw out, return, fill and ram, and including any planking and strutting required, and cart away surplus earth per ft. run	1 ft. deep		0	5
	2 ft. deep		0	10
	3 ft. deep		1	3
	4 ft. deep		1	8
	5 ft. deep		4	2
	6 ft. deep		5	0
	7 ft. deep		5	10
	8 ft. deep		6	8
4 in. best quality glazed stoneware drain pipe, socketed joints, yarn and neat cement, on and including cement concrete bed, 18 in. wide and 6 in. thick, and benched up on each side of pipe	per ft. run		2	4
6 in. do. do. do. but concrete bed 20 in. and 6 in. thick	,,		3	0
9 in. do. do. do. but concrete bed 23 in. wide and 6 in. thick	,,		4	11
Extra for 4 in. bends	each		2	6
Do. 6 in. ,,	,,		3	6
Do. 9 in. ,,	,,		5	6
Extra for 4 in, junctions	,,		2	9
Do. 6 in. ,,	,,		3	9
Do. 9 in. ,,	,,		6	0
4 in. stoneware gully, encased in concrete and making good granolithic paving	,,		13	0
6 in. do.	,,		14	0
9 in. do.	,,		18	6
4 in. stoneware interceptor, and surround with concrete	,,	1	5	0
6 in. do.	,,	1	10	0
9 in. do.	,,	2	10	0
IRON DRAINS.				
4 in. C.I. drain and laying and jointing in molten lead	per ft. run		3	4
6 in. do. do.	,,		5	0
Extra for 4 in. bends	each		10	0
Extra for 6 in. bends	,,		18	0
Extra for 4 in. junctions	,,		17	6
Extra for 6 in. junctions	,,		30	0
MASON.				
Bath stone and all labour, fixed	per ft. cube		10	9
Portland stone and all labour, fixed	,, ,,		17	9
York stone templates, fixed	,, ,,		12	6
York stone steps, fixed	,, ,,		16	0
York stone cills, fixed	,, ,,	1	2	0
SLATER.				
24 × 12 Bangor slates laid to 3 in. lap secured with zinc nails	per square	3	18	6
20 × 10 do.	,,	3	13	6
16 × 8 do.	,,	3	11	6
Extra to eaves course	per ft. run		0	9
Extra to top edge and square abutments	,,		0	4½
Extra to verge and labour only, bedding and pointing	,,		0	7½
Raking, cutting and waste	,,		0	7
Half-round red ridge tile	,,		1	2
Half-round blue ridge tile	,,		1	8
Fixing only soakers	per dozen		0	9
Red hand-made sand-faced tiles laid to 4 in. gauge, nailed every fifth course with galvanised iron nails	per square	3	0	0
Extra to eaves course	per ft. run		0	5
Extra to top edge and square abutments	,, ,,		0	3½
Extra to verge and bed and point	,, ,,		0	11
Half-round ridge	,, ,,		1	4
Bonnet hips, including cutting and waste (both sides)	,, ,,		3	8
Valley tiles, including cutting and waste (both sides)	,, ,,		3	6
Fixing only soakers	per dozen		0	9

CURRENT PRICES FOR BUILDING WORK IN LONDON.—continued.

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per ft. cube	4	0
Do. joints	„ „	4	6
Do. roofs, etc.	„ „	5	3
Do. trusses	„ „	6	9

		¾in.	1in.	1¼in.
Deal rough close boarding	per sq.	32/-	38/-	47/-
Battens for slating	„	10/-	11/-	12/-
Centre for arches	per ft. super			1 6
Gutter boards and bearer	„ „			1 0

FLOORING.

		¾in.	1in.	1¼in.	1½in.
Deal edges shot	per sq.	—	41/-	49/-	58/-
Do. tongued and grooved	„	—	46/-	55/-	67/-
Do. matchings	„	42/-	47/6	—	—
Moulded skirtings, including backings and grounds	per ft. super	1/4	1/7	1/9	2/3
Mitres	each	-/6	-/8	-/9	1/-
Stop ends	„	-/3	-/4	-/4	-/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half in. moulded sashes	per ft. super	1	9
Two in. do. do.	„ „	2	0
Add for fitting and fixing	„ „	0	2
Deal cased frames, 1 in. linings, 1½ in. pulley and stiles, 2 in. moulded sashes, in squares, hardwood cill, double hung with pulleys, lines and weights, average size	„ „	3	3

DOORS.

		1½in.	1¾in.	2in.
Two-panel square framed	per ft. super	2 1	2 3	2 5
Four-panel do.	„ „	2 4	2 6	2 9
Two-panel moulded both sides	„ „	2 6	2 9	2 11
Four-panel do. do.	„ „	2 9	2 11	3 2

		£	s.	d.
Flush doors. 1½ in. to 2 in. finished thickness skeleton core, covered each side with Columbian pine ply, solid pine edging, 2 ft. 6 in. by 6 ft. 6 in.	each	1	15	0
Do., covered with Gaboon mahogany ply, solid mahogany edging, 2 ft. 6 in. by 6 ft. 6 in.	„	2	0	0
Solid core, all as first item	„	2	0	0
Solid core, all as second item	„	2	5	0
Shaped peep holes, 4 sided	„	0	5	0
Hexagonal holes	„	0	6	0
Circular holes	„	0	7	0

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per ft. cube	12	0
Hardwood do. do.	„ „	36	0

		1in.	1¼in.	1½in.
Plain deal jamb linings, framed	per ft. super	1 7	1 8	1 11
Deal shelves and bearers	„ „	1 2	1 4	1 7
Add if cross-tongued	„ „	-/2	-/2	-/2
Deal window board, tongued to oak cill and bearers	„ „	1 6	1 9	2 0
Deal moulding, tongued and grooved to window board	per ft. run			0 6

SUNDRIES.

		s.	d.
Deal architrave, including mitres per sectional inch.	per ft. run	0	1
Glazing beads, deal fixed	„ „	0	2
Do. fixed with brass screws and cups	„ „	0	4
Rebate	„ „	0	0½
Groove	„ „	0	0½
Notching	„ „	0	2
Tongued and grooved angle	„ „	0	3½
Rounded heel and hollow	„ „	0	2½

STAIRCASES.

		1in.	1½in.	1¾in.	2in.
Deal treads and risers on and including rough brackets	per ft. super	2/-	2/3	2/8	—
Deal strings, wrot and framed	„ „	—	—	2/2	2/8
Housings	each				0 9
Mahogany handrail, average 3 in. x 3 in.	per ft. run				5 6
Add if ramped	„ „				11 0
Add if wreathed	„ „			1	2 0

FIXING ONLY IRONMONGERY.

	s.	d.
Barrel bolts	0	8
Sash fasteners	1	0
Casement fasteners	1	2
Casement stays	1	2

FIXING ONLY IRONMONGERY—*Continued.*

	£	s.	d.
Flush bolts		1	6
Cupboard locks		1	6
Rim locks and furniture		2	0
Mortice locks and furniture		4	0
Floor springs, including oil	1	0	0
Overhead springs		5	0

FOUNDER AND SMITH.

		£	s.	d.
Rolled steel joists	per cwt.	1	1	0
Compound girders	„	1	4	0
Stanchions	„	1	6	0
Roofwork	„	1	12	0

RAINWATER GOODS.

		3 in.	4 in.	5 in.	6 in.
Half-round eaves gutters and fixing	per ft. run	1/3	1/4	1/10	1/11
Ogee do. do.	„ „	1/5	1/6	2/1	2/9
R.W. pipe and fixing	„ „	1/7	2/1	—	—
Extra for shoes and bends	each	3/3	4/6	—	—
Do. stopped ends	„	1/3	1/7	2/-	3/-
Do. nozzles and angles	„	2/7	3/-	4/2	4/8

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	40	0
Do. in flats	„	39	0
Extra labour and solder in cesspools	each	6	0
Welt joint	per ft. run	0	4
Soldered seam	„ „	1	6
Copper nailing—close	„ „	0	3
Do. do. open	„ „	0	2
Soldered dots	each	2	0
Bossed ends to rolls	„	0	6

	½in.	¾in.	1in.	1¼in.	1½in.	2in.	4in.
Lead overflow per ft. run	-/8½	1/-	1/6	1/9	2/1	2/9	—
„ service „	1/2	1/9	2/8	3/6	4/-	5/3	—
„ soil „	—	—	—	—	—	—	6/-
Bends in pipe each	—	—	—	—	1/9	2/-	5/6
Wiped solder joints „	1/9	2/3	2/6	3/-	3/4	4/-	5/9
Lead traps and cleaning screws „	—	—	—	6/6	9/6	—	—
Stopcocks and joints „	11/-	14/-	18/-	—	—	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yd. super	2	0
Do. narrow widths	per ft. super	0	4
Do. and set with Sirapite	per yd. super	2	3
Do. narrow widths	per ft. super	0	4
Do. and set with Keenes	per yd. super	3	0
Do. narrow widths	per ft. super	0	5½
Add sawn lathing	per yd. super	1	4
Add metal lathing (not including hangers or runners for suspended ceilings)	„ „	2	4
Portland cement screed	„ „	1	7
Do. plain face	„ „	3	3
Mouldings in plaster	per 1 in. girth	0	1½

GLAZIER.

		s.	d.
24 oz. sheet	per ft. super	0	7½
26 oz. sheet	„ „	0	8
24 oz. Obscured sheet	„ „	0	8½
Double Cathedral	„ „	0	9½
Majestic	„ „	0	10
Flemish	„ „	0	10
Pinhead Morocco	„ „	0	10
¼ in. rough rolled or cast plate	„ „	0	10½
¼ in. wired cast plate	„ „	1	1½

PAINTER.

		s.	d.
Preparing and distempering, two coats	per yd. super	0	7½
Knotting and priming	„ „	0	7
Plain painting, one coat	„ „	0	9
Do. two coats	„ „	1	2
Do. three coats	„ „	1	9
Do. four coats	„ „	2	4
Graining	„ „	2	3
Varnishing, twice	„ „	1	9
Sizing	„ „	0	3
Flatting	„ „	0	7
Enamel	„ „	1	1
Wax polishing	per ft. super	0	6
French polishing	„ „	1	2
Preparing for and hanging paper	per piece	2/- to 4/-	

PRICES CURRENT OF MATERIALS*

Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by inquiry.

BRICKS, &c.

Delivered to site, City and Central Area, Full Lorry Loads. £ s. d.
Best Stocks 4 15 0
Second Hard Stocks 4 8 0

Per 1,000. Delivered at London Goods Stations.

2½ in Phorpres.	King's Cross Station. per 1,000. s. d.	To sites in W.C. District. per 1,000 s. d.
Pressed bricks	46 3	50 6
Cellular bricks	46 3	50 6
Keyed bricks	48 3	52 6
Cellular Keyed bricks	48 3	52 6
Rustic bricks	*66 3	*70 6
Cellular Rustic bricks	*66 3	*70 6
Single Bullnose	64 3	68 6
White bricks	*66 3	*70 6
Sandfaced bricks	—	75 6

* Subject to a special discount of 2s. per 1,000 if accompanied by order for Pressed

	£ s. d.
White Midhurst Facing Bricks (delivered London site)	3 12 6
Best blue Pressed Staffs	8 6 6
Do., Bullnose	8 16 6
Blue Wire Cuts	7 4 0

Best Stourbridge Fire Brick:—

£ s. d.	£ s. d.
2½ in. 7 15 0	3 in. 8 15 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	24 0 0	D'ble Str'tch'rs ..	32 10 0
		D'ble Headers ..	29 10 0
Headers	23 10 0	One side & two ends	33 10 0
Quoins, Bullnose and 4½in. Flats.	30 10 0	Two sides&one end Splays and Squints	34 10 0
			31 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

"PHORPRES" HOLLOW PARTITION BLOCKS.

2" per yd. sup.	2 3	3" per yd. sup.	2 9
2½" " "	2 6	4" " ...	3 1

CLINKER CONCRETE.

2" per yd. sup.	1 6	3" per yd. sup.	2 0
2½" "	1 8	4" "	2 4

CRANHAM TERRA COTTA.

2" per yd. sup.	3 0	3" per yd. sup.	3 8
2½" " ..	3 6	4" "	4 7

HEMPSTEAD—KEYED TWO SIDES.

12" x 9" x 2"	2 6	12" x 9" x 3" ..	3 0
12" x 9" x 2½"	2 9	12" x 9" x 4" ..	3 9

Per yard super d/d. Free on site, London

	s. d.	
Thames Ballast	7 3	per yd.
Pit Ballast	6 3	" "
Pit Sand	7 9	" "
Washed Sand	8 3	" "
¾in. Shingle	7 3	" "
¾in. Broken Brick..	11 3	" "
Pan Breeze	8 3	" "

delivered 2 miles radius Paddington.

CEMENT.

Best British Portland Cement. Standard Specification delivered London Area in jute sacks (11 to ton), or paper bags (20 to ton) free (non-returnable):—

	£ s. d.
4 ton loads and upwards site .....Per ton	2 2 0
1 ton to 4 tons site	2 5 0
Alongside Vauxhall in 80-ton lots	1 19 6
"Ferrocrete" Rapid Hardening Cement:—	
4 ton loads and upwards site	2 8 0
1 ton to 4 tons site	2 11 0
Alongside Vauxhall in 80-ton lots	2 5 6

Stores in Reserved Bins at Works 1/6 ton extra.

NOTE.—Jute sacks are charged 1s. 6d. each and credited 1s. 6d. nett, if returned in good condition within three months, carriage paid.

"Aquacrete" Water Repellent, "Blue Circle" Cement, 30/- per ton extra on ordinary "Blue Circle" Portland Cement prices.

"Colorcrete" Nos. 1 and 2 Coloured Rapid Hardening Portland Cement in 1-cwt. paper bags free (non-returnable) in 1-ton lots and upwards site. 3 9 0

"Colorcrete," not rapid-hardening, in 1-cwt. paper bags free (non-returnable), according to colour, from £7 to £15 10s. per ton.

"Snowcrete" White Portland Cement in 1-cwt. paper bags free (non-returnable) 1 tons and upwards site. 8 15 0

Super Cement (Waterproof) paper bags free 3 12 0
Roman Cement £6 15 Keene's Cement, White 6 0 0
Parian Cement £6 0 " " Pink 5 12 6
Cementone Colours for cement according to tints per cwt. from £2 16s. 0d.

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink ..	3 2 0	Sirapite, Coarse	3 10 0
White	3 12 6	" Finish	3 18 0
" Pioneer	3 10 6		
Super Carbo ..	2 7 6	4-ton loads & over London	
Carbo Setting ..	2 12 6	Area, paper bags free.	
Best Ground Blue Lias Lime ..	1 17 6	Grey Stone Lime ..	2 2 0
		Chalk Lime	2 2 0
GraniteChippings	1 12 0	Hair per cwt.	2 7 6

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d., if returned in good condition within three months, carriage paid.

Stourbridge Fireclay in sacks 37s. per ton at rly. dep.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2 10½
BEER STONE—RANDOM BLOCK—	
Free on rail at Seaton Station, per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. "	3 1½
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.	
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 5
Do. do. delivered on road waggons as above stations, per ft. cube	4 6
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ¼d. beyond 30 ft.	
HOPTON-WOOD STONE—	
F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over P.ft.cb.	14 0
Sawn two sides.	22 6
HOPTON-WOOD STONE—	
Sawn three or four sides	27 9
YORK STONE, BLUE.—*Robin Hood Quality.*	
Delivered at any Goods Station, London.	
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... per ft. super	5 0
6 in. rubbed two sides, ditto .. "	5 6
3 in. sawn two sides slabs (random sizes) ..... "	2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) ..... "	1 6½
1½ in. to 2 in., ditto ..... "	1 3½
HARD YORK—	
Delivered at any Goods Station, London.	
Scappled random blocks ..... Per ft. cube	6 3
6 in. sawn two sides landings to sizes (under 40 ft. super) ..... per ft. super	5 1½
6 in. rubbed two sides, ditto .... "	6 1½
4 in. sawn two sides slabs (random sizes) ..... "	3 1½
2 in. ditto ditto ..... "	2 5
2 in. self-faced random flags. ... Per yd. super	7 6

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 7s. 6d. Moulded, 8s. 6d. Sills, 10s. 0d.

HARD WOOD.

1 INCH AND UP THICK

	£ s. d.
Average price for prime quality.	
Dry Austrian Wainscot, per ft. cube	0 17 0
Dry American and/or Japanese Figured Oak, per ft. cube .....10 0 to	0 12 6
Dry American and/or Japanese plain Oak, per ft. cube	0 11 3
Dry sq. edged Honduras Mahogany, per ft. cube	0 15 0
Dry log-cut Honduras Mahogany, per ft. cube ..... 12 6 to	0 16 6
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube. ...	0 10 6
Best Scotch Glue, per cwt.	3 0 0
Liquid Glue, per cwt. ..... 4 7 0 to	5 10 0

SOFT WOOD.

GOOD BUILDING DEAL.

Inches.	Per stan.	Inches.	Per stan.
4 ×11	£26 10	3 × 6	£22 10
4 × 9	26 10	3 ×11	26 10
4 × 8	24 10	2 ×11	26 10
4 × 7	24 10	3 × 9	23 10
3 × 8	22 10	2½ × 9	23 10
3 × 7	22 10	3 × 4½	22 0
2½ × 7	22 10	3 × 4	22 0

PLANED BOARDS.

1 × 11.....	£26 10
1 × 9	£25 0

PLAIN EDGE FLOORING.

Inches.	Per sq.	Inches.	Per sq.
⅝	17/-	1½	28/-
¾	20/-	1¾	35/-
1	22/-		

HUDDERSFIELD
Building Society

Experience has shown that the arrangements made by the Huddersfield to assist occupier borrowers have given the utmost satisfaction, and the service rendered has been greatly appreciated by builders' clients.

Write for information to The Huddersfield Building Society, Britannia House, 203, Strand, London, W.C.2, or to the Head Office, Britannia Buildings, Huddersfield. Andrew Stewart, C.A., Managing Director.

WHEN YOU INVEST—A HOUSE IS BEST

TONGUED AND GROOVED FLOORING.

Inches.	Per sq.
1	22/6
1¼	29/-
1½	36/-

ins. BATTENS. s. d.
¾×2 per 100 ft. 2 6

MATCHING (BEST).

inches.	Per sq.
⅝	18/-
¾	20/-
1	26/-

SAWN LATHS. s. d.
Per bundle..... 2 4

SLATES

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	31 5 0	18 by 10	16 10 0
22 by 12	26 5 0	18 by 9	14 17 6
22 by 11	23 12 6	16 by 10	14 7 6
20 by 12	23 2 0	16 by 8	11 6 9
20 by 10	20 15 0		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. .....Per 1,000 f.o.r. London.

	£ s. d.
Best machine-made tiles from Broseley or Staffordshire district	£4 2 6
ditto hand-made ditto	4 17 6
Ornamental ditto	5 2 6
Hip and valley tiles (per dozen) { Hand-made	0 8 6
{ Machine-made	0 8 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—	
R.S. Joists, cut and fitted.	£17 10 0
Plain Compound Girders	20 10 0
" " Stanchions	22 10 0
In Roof Work	27 10 0

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	18 5 0	⅝ in. to ⅞ in. ..	16 15 0
⅜ in.	17 5 0	⅝ in. to 2¾ in. ..	16 5 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £10 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes and Tubulars. Sizes. ⅛in. to ⅜in.	Standard Wrot. Flanges. Sizes. ⅛in. to 2in.	Standard Fittings.
	%	%	%
Gas	60	65	58½
Water	57	62½	55
Steam	53½	58½	50
Gal. gas ..	50	55	48½
Galv. water	45	50	43½
Galv. steam	38½	43½	40

C.I. HALF-ROUND GUTTERS—London Price ex Works

Per yd. in 6 ft. lengths,	Gutters.	Angles and Nozzles.	Stop Ends.
3in.	1/9½	1/8	7d.
3½in.	2/1	2/-	8½d.
4in.	2/1	2/-	8½d.
4½in.	2/2½	2/1	9d.
5in.	2/4½	2/4	10d.

O.G. GUTTERS.

3in.	2/1	2/-	8½d.
3½in.	2/3½	2/2	9½d.
4in.	2/5	2/4	10½d.
4½in.	2/6	2/5	1/0½
5in.	2/10	2/9	1/2½

RAIN WATER PIPES, &c.

Per yd. in 6fts.	Pipe.	Bends, stock angles.	Branches. stock angles.
2in.	2/8½	1/8	2/5½
2½in.	2/9½	1/11	2/11½
3in.	3/8	2/4½	3/7½
3½in.	4/1	2/10½	4/1½
4in.	4/9½	3/5	5/-

Less 20 per cent. trade discount.
Tonnage allowance—4-ton lots, 5 per cent. 2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Stock,

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2in. per yd. in 6fts. ..	3 5	2 5	2 11
2½in. " ..	3 10	2 8	3 8
3in. " ..	4 2	2 11	4 4
3½in. " ..	4 7	3 8	5 0
4in. " ..	5 1	4 0	5 10

L.C.C. COATED DRAIN PIPES.—London Prices, ex Stock.

	Pipe.	Bends, stock angle,	Branches, stock angles.
	s. d.	s. d.	s. d.
3in. per yd. in 9ft. lengths	4 9	5 4	8 9
cwt. qr. lbs.			
4in. .. 1 1 20 ..	6 0	6 4	11 0
5in. " 1 2 22 ..	8 4	11 0	16 11
6in. " 2 0 6 ..	10 0	12 10	21 3

Gaskin for jointing 45/- per cwt.

IRON—	Per ton. £ s. d.		London. £ s. d.
Common Bars	13 15 0	..	14 15 0
Staffordshire Crown Bars—			
Good merchant quality.	15 10 0	to	17 0 0
Staffordshire Marked Bars ..	18 0 0	..	19 0 0
Mild Steel Bars	13 10 0	..	14 10 0
Steel Bars, Ferro-Concrete quality, basic price	15 0 0	..	16 0 0
Hoop iron, basic prices	15 0 0	..	16 0 0
" Galvanised	25 0 0	..	27 0 0

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—(*Cont.*)

IRON— Per ton in London.

	£ s. d.	£ s. d.
Soft Steel Sheets, Black—		
Ordinary sizes, to 20 g. ..	17 5 0 ..	18 5 0
" " 24 g. ..	18 5 0 ..	19 5 0
" " 26 g. ..	19 5 0 ..	20 5 0
Sheets, Flat, Best Soft Steel, C. R. and C.A. quality—		
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	18 10 0 ..	19 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.....	20 10 0 ..	21 10 0
No. 1 quality £4 per ton extra.		
Flat and Galvanised Corrugated Sheets—		
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	20 0 0 ..	22 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g..	20 10 0 ..	24 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	22 10 0 ..	24 10 0
Sheets, Galvanised, Flat, Best quality—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	21 0 0 ..	24 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	22 0 0 ..	21 10 0
Best Soft Steel Sheets, 26 g.	23 10 0 ..	24 10 0
Cut Nails, 3 in. to 6 in.	19 10 0 ..	21 10 0
(Under 3 in. usual trade extras.)		

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

		s. d.
Seamless Copper tubes (basis)	per lb.	1 1
Strong sheet	"	1 3
Thin	"	1 4
Copper nails	"	1 3
Copper wire	"	1 3

PLUMBERS' BRASS WORK.

Delivered in London.
Stamped by Met. Water Board.

CRUTCH HEAD SCREW DOWN BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
32/-	47/- per doz.

CHROMIUM PLATED TOILET SCREW DOWN BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
42/-	61/6 per doz.

SCREW DOWN STOP COCKS FOR IRON.

¾ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
27/6	42/6	75/-	181/-	264/-	409/-	per doz.

SCREW DOWN STOP COCKS WITH TWO UNIONS FOR LEAD.

¾ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
46/6	68/6	106/-	205/-	307/-	590/-	per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
7/6	10/6	16/-	29/-	39/-	56/-	per doz.

HEAVY CROYDON BALL VALVES.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	
36/-	59/6	96/-	205/-	278/-	per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.	
10/-	12/-	18/6	32/-	44/-	48/-	per doz.

BRASS FERRULES OF SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.	
10/-	12/-	22/6	31/-	45/6	per doz.

DRAWN LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1½ in.	1½ in.	2 in.	3 in.	
8 lb. Lead P...	22/6	30/-	42/-	68/-	per doz.
8 lb. Lead S...	25/6	32/6	49/-	83/-	per doz.

SOLDER.—Plumbers', 1/1, Tinmen's, 1/3, Blowpipe, 1/5 per lb.

PAINTS, &c.

		£ s. d.
Raw Linseed Oil, in pipes	per gallon	0 2 7
" " " in barrels	"	0 2 9
" " " in drums	"	0 2 11
Boiled " " in barrels	"	0 3 0
" " " in drums	"	0 3 2
Turpentine, in barrels	"	0 3 2
" in drums (10 gals.) ..	"	0 3 4
Genuine Ground English White Lead, per ton		50 0 0
(In not less than 5-cwt. casks.)		
Extra for 1-cwt. kegs over 5-cwt. casks is 2/9 cwt.		
GENUINE WHITE LEAD PAINT.		
"Father Thames," "Nine Elms," "Park," "Supremus," "St Pauls," "Morganswyte," "Polarco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots	per ton delivered	69 0 0
Red Lead, Dry (packages extra)..	per ton	38 0 0
Best Linseed Oil Putty	per cwt.	0 14 9
Size. XD quality	fkn.	0 3 6

VARNISHES, &c.

		Per gallon.
Oak Varnish	Outside	0 14 0
Fine Do.	"	0 16 0
Fine Copal	"	0 18 0
Pale Copal	"	1 0 0
Pale Opal Carriage	"	1 4 0
Best do.	"	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	"	0 18 0
Fine Copal Cabinet	"	1 2 0
Fine Copal Flatting	"	1 0 0
Hard Drying Oak	"	0 18 0
Fine Hard Drying Oak	"	0 19 6
Fine Copal Varnish	"	1 0 6
Pale do.	"	1 12 0
Best do.	"	1 2 6
Best Japan Gold Size		1 12 6
Best Black Japan		0 10 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 6
Berlin Black		0 14 0
Knotting (patent)		0 15 0
French and Brush Polish		0 12 0
Liquid Dryers in Terebene		0 9 0
Cuirass Black Enamel		0 7 0

THE SCOTTISH BUILDER

NEW BUILDINGS

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Where business representatives cannot be seen personally at this stage, this should be mentioned. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Wednesday morning.

ABERDEEN.—HOUSING.—Plans prepared by Mr. Albert Gardner, architect, Broadstreet, The Castlegate, Dundee, for 124 houses at Anderson-drive North, at £60,000, and Tullos housing site, 163 houses, at £82,500.

ABERDEEN. — SCHOOL.—The E.C. are to proceed with a new primary school at Kaimhill, with accommodation for 1,100 pupils.

ABERDEEN.—HOUSES.—Mr. E. L. Williamson, architect, 154, Union-street, Aberdeen, has in hand the plans for a housing scheme for the village of Lumsden for Aberdeenshire C.C.

ABERDEENSHIRE. — HOUSES.—The Property and Works Committee of the C.C. has accepted tenders for 10 houses at Longside, amounting to £5,000; 30 houses at Fyvie, £9,500; and 41 houses at Waterton, £19,500.

AYR.—HOUSES. — The Corporation, from plans by Mr. John Young, Municipal Buildings, is to erect 36 timber houses at Mainholm-road.

BONNYBRIGG-LASSWADE. — PAVILION. —The Corporation is to erect, at £2,150, at the Public Park, a new pavilion.

BUCKHAVEN-METHIL. — PAVILION. — The Corporation, whose architect is Mr. Peter Sinclair, 305, Wellesley-road, Methil, is to erect new physical training pavilion.

CUPAR.—HOUSING.—Messrs. David Beat and Son, builders and contractors, Perth, have purchased the farm of Westfield, Cupar. Messrs. Beat have also purchased Loans and Ashlar Parks, fronting Westfield-road and Lovers'-lane, respectively.

DUMBARTON. — OFFICES.—Schedules are now being prepared for the new Courts Buildings, for which Mr. Joseph Weekes, 18, Park-circus, is the architect.

GREENOCK. — HOUSES.—The Department of Health for Scotland has given its approval to the T.C.'s scheme for 100 timber houses.

INVERNESS. — HOTEL. — The Inverness Licensing Court has passed plans for a new hotel at Bogbain, near Inverness, for Messrs. Lochness Hotels, Ltd., at £20,000.

INVERNESS.—HOUSING.—The T.C. have agreed to the development of a new housing scheme at the Muirton Nursery site. The architects are Messrs. Thomas Munro and Co., architects and surveyors, 62, Academy-street.

KINLOCHLEVEN. — HOUSES.—The Kinlochleven Village Improvement Society have decided to build a further 66 houses.

LARGS.—RECONSTRUCTION.—Plans are to be prepared for reconstruction and extension to the Castle-Pension hotel, which will include the addition of 20 bedrooms, at £3,000.

MILNGAVIE. — BUILDING.—The Dean of Guild Court has passed the following plans: Dumbartonshire C.C., police-station and court-house in Main-street, at £14,000; and T.C., 12 4-apartment flatted houses in Sinclair-street, at £5,700.

RENFREWSHIRE. — BUILDING. — The County Dean of Guild Court has passed the following plans: McTaggart and Mickel, Ltd., 65, Bath-street, Glasgow, 24 4-apartment houses at Sundale-avenue and new road off Sundale-avenue, Clarkston, and 2 houses at Rockmount-avenue, Thornliebank, and 2 houses at Broomvale-drive, and one house at Broompark-drive, Newton Mearns; Thornliebank-Co-operative Society, garage at Summerlea-road, Thornliebank; Trustees of the Mure Memorial Hall, additions to the Mure Hall, Tannoch-road, Uplawmoor.

ROTHESAY.—PREMISES.—Plans have been presented to the Dean of Guild Court for the erection at Montague-street, from plans

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from April 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A¹	A²	A³	B	B¹
Craftsmen.....	1/8	1/7½	1/7	1/6½	1/6	1/5½
Labourers	1/3	1/2¾	1/2¼	1/2	1/1½	1/1¼

Aberdeen	A	East Fife (embraced by a line from Largo to Kingsbarns and eastward to the Coast).	B	Hamilton	A
Ayrshire	A			Inverness	-
Banff	B			Inverurie	A¹
Berwickshire	A²	East Lothian	A	Kincardineshire	A²
Bridge of Allan	A	Edinburgh	A	Kinross-shire	A
Broughty Ferry	A	Fifeshire (with the exceptions of towns in East Fife which are under Grade B)	A	Lanarkshire	A
Clackmannanshire	A			Mid-Lothian	A
Doune	A			Monifieth	A
Dunblane	A			Moray and Nairn	B
Dumbartonshire	A	Forfarshire	A	Newport	A
Dumfriesshire	A¹	Glasgow	A	Peeblesshire	A²
Dundee	A	Greenock	A	Perth	A
Dunoon	A				

Perthshire	A
Peterhead	A
Renfrewshire	A
Rothesay	A
Roxburghshire	A¹
St. Andrews	A
Selkirkshire	A¹
Stewartry	A¹
Stirlingshire	A
Stornoway	A
Tayport	A
West Lothain	A

This town has its own rates: Masons, 1/6; Carpenters, 1/6; Slaters, 1/6, Plumbers, 1/6½; Plasterers, 1/7 but 1/8 is paid owing to the scarcity at present; Painters, 1/6; and Labourers, 1/1½.

The information given in this table is copyright. Rates of wages in England and Wales are given on page 902.

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

ORDINARY GLAZING QUALITY AND SELECTED GLAZING QUALITY.

	per ft. super.		pe ft. super.
16 oz. O.Q.	2½d.	32 oz. O.Q.	5½d.
18 ,, S.Q.	2½d.	32 ,, S.Q.	6½d.
24 ,, O.Q.	3½d.	Obscured Sheet, 19 oz	3d.
24 ,, S.Q.	3½d.	,, ,, 24 ,,	4½d.
26 ,, O.Q.	3½d.	Fluted .....21 oz.	9d.
26 ,, S.Q.	4½d.	Em'lld 18 oz.,5½d.,24oz. 6½d.	

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

	Per ft. s. d.
Rolled plate, ¼ in.	5½d.
Rough cast double rolled, ⅛ in.	6½d.
Rough cast double rolled, ¼ in.	6½d.
Figured rolled, etc., white	6½d.
Figured rolled, etc., tinted.	9½d.
Rolled Sheet	6d.
White rolled cathedral	6d.
Tinted rolled cathedral	8½d.

Rolled plate is the same price as rough cast double rolled.

	Per ft. s. d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	0 10½
Wire Rolled, ¼ in. thick	0 9½

	s. d.
Wired Cast, ¼ in. thick.	0 9½
"Calorex" Sheet, 21 oz.	2 6
,, ,, 32 oz.	4 0
,, Cast, ¼ in. thick	0 10
,, ,, ⅜ in. thick	1 0
,, ,, ½ in. thick	1 2

"VITA" GLASS.

Clearsheet—not exceeding 1 foot	1 0
,, ,, 2 feet	1 3
,, over 2 feet	1 9
Polished plate not exceeding 1 foot	1 6
,, ,, 2 feet	3 0
Cathedral—not exceeding 1 foot	1 0
,, larger sizes.	1 6
Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet.	1 0
3/16 in. Wired Georgian Design. Sizes up to 96 inches long by up to 24 inches wide	2 6

LEAD, &c.

(Delivered in London.)	Per ton. £ s. d.
LEAD.—Sheet, English, 4 lb. and up	24 10 0
Pipe in coils	24 0 0
Soil pipe	29 10 0
Compo pipe	31 5 0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills ..... per ton £14 5 0

prepared by Mr. D. C. Donaldson, architect, 3-5, New Bond-street, London, and new premises for Messrs. Woolworth.

TAYPORT.—CHURCH.—The Dean of Guild Court has granted permission to the Roman Catholic Diocesan to erect a new church, in Cupar-road.

TENDERS ACCEPTED

Aberdeen.—32 three-apartment and 24 four-apartment flatted houses, second section of Tullos housing scheme, for T.C.:—Brick, *W. Hardie, Linlithglow, £8,462; joiner, *J. Black, Aberdeen, £6,475; slater, *William Coutts & Son, Aberdeen, £2,148; plumber, *Andrew M'Robb, Ltd., Aberdeen, £2,906; lath and plaster, *James Scott & Son, Ltd., Aberdeen, £2,157; grates, *W. Seatter, Aberdeen, £687; electric light, *Stroud & Weir, Aberdeen, £366; painter and glazier, *Alexander Mackie, Aberdeen, £771.

Aberdeen.—48 bungalows and complete offices at the Great Western-rd. Thomas Scott Sutherland, architect and quantity surveyor, Amicable House, Union-st.:—Excavation, brick and building, *A. & R. Cruickshanks, Aberdeen; plumber and sanitary engineering, *John T. Anderson, Ltd., Aberdeen; roughcasting and allied works, etc., *G. Crawford, Aberdeen; reinforced concrete, *S. B. Russell, Aberdeen.

Berwickshire.—New school at Chirnside, for C.C.:—Mason, *J. H. Pierce, Dunbar; joiner, *A. Bulman, Ltd., Kelso; plumber, *R. May, Whitburn; plaster, *J. H. Pierce, Dunbar; harling, *P. Kelly & Sons, Edinburgh; terrazzo, *Toffollo Jackson & Co., Glasgow and Edinburgh; glazier, *R. Mitchell, Hawick; steel casements, *Metal Casements, Ltd., England; heating installation, *Taylor & Fraser, Ltd., Glasgow; electric installation, *W. A. Smith & Co., Edinburgh; playgrounds, *Scottish Tarmac, Glasgow; painter, *Neil Nicholson, Kirkcaldy; asphalt roofs, *William Briggs & Son, Dundee; blinds, *A. Douglas & Son, Edinburgh; smith work, *T Hadden, Edinburgh; cloak rails, *Smith Fletcher & Co., Edinburgh. Cost, £25,054 19s. 10d

Cartcosh.—72 houses. William Brown, Lanarkshire County Housing Architect, Clydesdale-st., Hamilton:—Excavation, brick and building, *E. Morgan & Co., Ltd., Townhead, Hamilton, £14,364; joinery, carpentry and ironmongery, *D. Wilkinson & Sons, Ltd., Chryston, £9,330; slater and roughcasting, *J. Wallace & Sons, Ltd., Chryston, £2,800; plumber and sanitary engineering, *G. Ferguson & Sons, Ltd., Airdrie, £3,354; plaster and lathing, *A. Park & Sons, Strathavon, £1,644; electrical fittings and installation, etc., *R. & H. Neilson & Co., Ltd., Bellshill, £906; plaster and all allied works, etc., *T. MacFarlane, Bellshill, £962; iron railings gates and allied works, etc., *R. Marchbanks & Son, Larkhall, £317.

Inverness.—Bridge over River Ness, for Corporation:—‡W. Tawse, Ltd., Rubislaw Quarries, Aberdeen.

Lanarkshire.—Police houses at Rutherglen. J. Stewart & Brown, architects, County Council Offices, Beckford-st., Hamilton:—Excavation, brick and building, *H. B. Kerr, Hamilton, £5,767; joinery, carpentry and ironmongery, *J. G. Dunn & Son, Cambuslang, £4,570; steel casements and casements, etc., *The Crittall Manufacturing Co., Ltd., Glasgow, £332; plaster, lathing and cement, *C. Mersers & Sons, Lanarks, £1,175; slater, cement, roughcasting, *W. Bannatyne, Ltd., Blantyre, £1,195; plumber and sanitary engineering, *Duncan Johnstone, Strathavon, £1,692; iron railings, gates and allied works, etc., *A. J. Mair & Co., Ltd., Glasgow, £205; electrical fittings and installation, etc., *Ferguson & Kennedy, Lanarks, £760.

Motherwell.—New department for out-patients at the County Hospital. J. Stewart, architect, Albert-st., Motherwell-Wishaw:—Excavation, brick and mason, *Scott & Co., Delltown, Motherwell-Wishaw, £593; joinery, carpentry and ironmongery, *Lanarkshire County Works Dept., Motherwell-Wishaw, £917; plumber work and sanitary engineering, etc., *R. Campbell & Sons, Motherwell-Wishaw, £399.

¶Scotland.—Tenders accepted by H.M.O.W., Edinburgh, during week ending November 1:—Automatic telephone exchange, Nairn—erection, A. Hall & Son (Builders), Ltd., 15, Mid Stocket-rd., Aberdeen.

National Coal Convention.

The Fourth National Coal Convention, organised by the Coal Utilisation Council, which was postponed from October 5 and 6 owing to the international crisis, will be held at the Hotel Great Central, Marylebone-road, London, N.W.1, on November 23 and 24. As originally arranged, the Convention will be opened by the Right Hon. Oliver Stanley, M.P., President of the Board of Trade; and Capt. H. F. C. Crookshank, M.P., the Secretary for Mines, will be guest of honour at the inaugural luncheon. Papers will be read and films of special interest to the industry shown. The chair at the inaugural luncheon will be taken by Sir Evan Williams, Bart., President of the Mining Association and of the Coal Utilisation Council. On the evening of November 24 there will be a dinner and ball, at which Lord and Lady Gainford will be the host and hostess on behalf of the Council.

TENDERS

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Wednesday morning.

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government departments*.

Antrim Regional.—Alterations and additions to lavatory buildings connected with Muckamore P.E. school. W. D. R. Taggart, C.E., architect:—*S. Kirkpatrick & Sons, Shanoguestown, Muckamore, £380 9s.

Aylesbury.—Painting and decorating in the Cattle Market and at the cemetery chapels, for T.C. W. H. Taylor, M.Inst.M. and Cy.E., B.E. and S.:—*R. Hubbard, Park-st., Aylesbury, £147 10s.

Ballymahon.—14 cottages:—Brendan Balfe, £4,918 and £4,512; Keenan Bros., £5,780 and £4,980; *J. Murphy, £4,647 1s. 6d. and £4,409 (bricks).

Barnsley.—Bottling stores, Duke-st., for Clarkson's Old Brewery (Barnsley), Ltd., The Old Brewery, Wood-st. Plans by Resident Architect, J. C. Backhouse:—Builders, *C. W. Squires & Sons, Ltd., Barnsley; steelwork, *Qualter Hall & Co., Barnsley; hollow block floors, patent roofs, *Caxton Floors, Ltd., London, S.W.1.

Belper.—2 pairs of semi-detached houses at Horsley, for R.D.C. G. Pym, C., 122, Bridge-st.:—*A. H. Harris & Sons, Marehay, £2,603.

Bermondsey.—Works, for B.C.:—Repointing as necessary, cleaning stonework and repainting all ironwork at Neckinger sub-station—*General Manager, £155 4s. 4d. Three additional flats in block No. 2, Kipling-st. area—*General Manager, £1,708.

Birmingham.—Works, for E.C.:—Second senior department at new Council school at Lea Village, Yardley—*Percy W. Cox, Ltd., Grove-ln., Handsworth, Birmingham, £29,200. Heating and domestic hot-water installation—*F. Evans & Sons, Ltd., Birmingham, £2,185. Lighting installation—*H. Pratt, Ltd., Birmingham, 6, £1,050. Alterations at Formans-rd. Council school—Builders—*C. Bryant & Son, Ltd., 55-65, Whitmore-rd., Small Heath, Birmingham, £9,572. Steelwork—*Braithwaite & Co., Engineers, Ltd. Gymnasium at Saltley College C.E. school—*W. Sapcote & Sons, Camden-st., Birmingham, £2,870. Improvements at Aston technical college—*E. G. Brown & Sons, £135.

Birmingham.—Premises, Essex-st. and Inge-st., for Cecil Kay, Ltd. M. H. P. King, architect, 121, Colmore-row:—*W. J. Whittall & Sons, Ltd., 132, Lancaster-st., Birmingham, 4.

Birmingham.—Warehouse, Irving-st., for Frank Taylor, Son & Sarsons. J. G. Gibbons, architect, 50, Suffolk st.:—*A. Gibbs, 124, Hurst-st., Birmingham, 5.

DON'T TENDER UNSUCCESSFULLY

SECURE CONTRACTS WITH

THE STEEL SCAFFOLDING CO., LTD.

Imperial House, 80, Regent St., London, W.1

Telephone: Regent 1157

Birmingham.—Premises, Wrottesley-st. and Ladywell-walk, for W. Mapstone, Ltd.. H. W. Simister, architect, Norwich Union-chambs., Congreve-st.:—*J. R. Deacon, Granville-st. and Holliday-st., Birmingham.

Birmingham.—Decontamination suite, provision of lavatories and baths, and garage, etc., Ladywood police station, for T.C.:—*Fitter & Sons, Ltd., Stratford-st., Birmingham, 11, £2,161.

Birr.—No. 3 housing scheme, for U.D.C.:—*J. Kenny, Banagher, £15,607; Kelly, Tyrellspass, Co. Westmeath, £14,636; W. Eades, Birr (High-st. scheme), £7,709.

Blackpool.—Works, for C.B.:—Superstructure of Lennox-gate pumping station—‡G. & H. H. Whitehead & Co., Ltd., Blackpool. Supply, delivery and fixing of steel sashes and casements at Derby baths—‡Henry Hope & Sons, Ltd., Smethwick. Demolition of properties, 252-260, Talbot-rd.—‡R. Pilling & Son. Installation of steel shelving and braced open racks to hold 130,000 respirators at premises leased by Corporation in Station-rd., South Shore; Pick-up-st., off Talbot-rd.; and Sutherland-rd.—‡Roneo, Ltd., Liverpool. Terrazzo work at Derby baths—‡Firmit Flooring Co., Blackpool. Electrical installation, Stanley school—‡J. W. Fielding. Heating apparatus, Stanley school—‡C. Seward & Co.

Blackpool.—Rebuilding "Fleece Hotel," Market-st., for Daniel Thwaites, Ltd., Eanam Brewery, Blackburn. Halstead Best, architect, 20, Clifton-st.:—*John Gregson & Son, 3, Newhouse-rd., Marton, Blackpool, £12,000.

Bradford—Melksham.—Houses, for R.D.C.:—*Miltshire, Whitley, £1,565 (one pair of non-parlour houses, one pair of four-bedroom houses and a boundary fence at Holt). *Miltshire, £1,595 (similar number of houses and fence at Semington). *Mortimer, Holt, £3,246 (four pairs of non-parlour houses and fencing at Hilperton).

Braintree and Bocking.—30 non-parlour type houses in Padfield-ln., for U.D.C. A. Cook, M.I.M. and Cy.E., E. and S.:—*H. Bragg, Halstead.

Brierley Hill.—10 bungalows, new town, Brockmoor, for U.D.C. R. H. J. Comber, M.I.M. and Cy.E., Hawbush House, Brettell-ln.:—*E. E. R. Tooly, Stourbridge, £2,990.

Brighton.—Reinforced concrete covered service reservoir at Woodingdean, for C.B.:—*Mears Bros. (Contractors), Ltd., £4,577 19s. 7d.

Bristol.—162 houses at Novers Hill, Knowle, for T.C.:—‡E. A. W. Poole & Sons, Ltd., £56,460.

Broadstairs.—Three pairs of semi-detached houses, Old Green-rd.:—*Hiller & Stevens, Broadstairs.

Castle Bromwich.—Junior and infants' school, for E.C. A. C. Bunch, County Architect, Warwick:—*Grosvenor Workman, 7, Gas-st., Birmingham, 1, £2,859 10s.

Chelmsford.—Bailiff's house at Joint Sewage Farm, for T.C.:—*J. H. Steele & Sons, £1,080.

Cheltenham.—101 brick built sheds on Pilley-ln. housing estate:—*E. L. Squire, of 3, Windsor-st., Cheltenham, £2,060 16s.

Chester-le-Street.—256 houses at Sacriston and 46 at Burnmoor, for R.D.C.:—*Direct labour, £120,275.

Chesterfield.—Clinic at Edmund-st., for T.C.:—*Frank Robson, Ltd., Sheffield, £4,489.

Colchester.—Heating and water installation at North-st. infants' Council school, for E.C.:—*Culver-st. Heating Co., £949.

Colne Valley.—Sewage disposal works, in reinforced concrete construction, for Colne Valley sewerage Board. Sandford, Fawcett & Partners, consulting engineers, 53, Victoria-st., S.W.1:—*Howard Farrow, Ltd., 1, Russell-parade, Golders Green-rd., N.W.11. (Cost £16,000.)

Colwyn Bay.—200 tool sheds for council houses, for T.C.:—*T. Alun Hughes, Llwynfryn, Brompton-av., Colwyn Bay, £1,850.

Coulsdon and Purley.—External decoration at 4 public libraries, for U.D.C.:—Gilbert A. Ballard, O.B.E., M.Inst.C.E., E. and S.:—*H. O. Keith, Ltd., Purley—Purley library. *Thos. Ailby, Ltd., Purley—Coulsdon, Kenley, Sanderstead libraries.

Cove.—Curator's cottage at town reservoir, for U.D.C.:—*Lehane Bros., Carrigaloe, £428.

Coventry.—Warehouse and garage, Palmer-ln., for Tuck & Blakemore, Ltd., The Swanswell. S. J. Oldham, architect, Chester House, High-st.:—*H. Clarke & Sons, Coronation-rd., Coventry.

Daventry.—4 semi-detached houses, for T.C.:—*T. & W. Atkin, Ashworth-st., Daventry, £1,960.

Derby.—New "Markeaton Hotel," at corner of Kedleston-rd. and Allestree-ln., Mackworth, for Worthington & Co., Ltd., The Brewery, Burton-on-Trent. Taylor, Sale & Widdows, St. Mary's-chams., St. Mary's-gate:—*Ford & Weston, Ltd., Osmaston-rd., Derby.

Dewsbury.—Installation of heating apparatus and alterations to existing system and hot water supply at Victoria central boys' school, for E.C.:—*Frank Newsome, Ltd., Union-st., Dewsbury, £663 12s. 6d.

Dudley.—Methodist church hall, Darby End, Netherton, for Trustees of Providence Methodist Church, Darby End, Netherton :—*A. Webb & Sons, Quarry Bank, Dudley.

Dudley.—Church and church hall, Wren's Nest-rd., Priory estate, for Church Council of St. Edmund's Church. Webb & Gray, architects, 200, High-st. :—*J. M. Tate & Son, Highfield-rd., Cradley Heath, Worcester.

Dundalk.—42 houses in Kerley's Field, for U.D.C. :—T. M'Donald & Sons, Dundalk—concrete blocks, £18,049; blocks and bricks, £18,301; all bricks, £18,989. John M'Guinness, Dundalk—concrete blocks, £17,854 10s.; blocks and bricks, £18,072 10s.; all bricks, £18,866 10s. P. M'Kenna & Sons, Dundalk—concrete blocks, £17,758; blocks and bricks, £17,904 15s.; all bricks, £18,744. Joe Healy, Drogheda—concrete blocks, £16,820 9s. 5d; *blocks and bricks, £17,080 3s. 3d.; all bricks, £17,543.

Durham.—Works, for County E.C. :—Fencing playgrounds at Birtley Elizabethville school—*Palmer Hall Timber Co., Dunston, £217. Fencing school garden, Burnhope senior mixed school—*Thompson & Son, Chester-le-Street, £119. Renewal of floors at Spennymoor North-rd. school—*F. A. Telfer, Spennymoor, £292. Improvements to out-offices at Leeholme Council school—*G. Stephenson, Bishop Auckland, £579 (subject to approval of B. of E.). Alterations to the Middlestone Moor Council school Spennymoor—*W. Wilson, Spennymoor, £2,695 (in lieu of tender withdrawn). Alterations to Brandon Council school—*T. Coats, Hallgarth-st., Durham, £2,000.

Exeter.—Reconstruction of 8, Elmgrove-rd., St. David's, as offices and flats, for Royal London Mutual Insurance Society, Ltd., Royal London House, Finsbury-sq., E.C.2. Lucas & Roberts, architects, 27, Dix's Field :—*D. Stoneham, Summer-ln., Whipton, Exeter.

Gainsborough.—Alterations and additions to girls' high school, Morton-ter., and new County Technical College, for Lincolnshire E.C. P. W. Birkett, architect, County Offices, Newland, Lincoln :—*B. Pumfrey, Ltd., North-st., Gainsborough, £86,665.

Gloucester.—Erection of "Market House" inn. Waller & Son, architects, 17, College-green, Gloucester :—*Bovis, Ltd., 82, South Audley-st., London, W.1.

Great Broughton.—20 houses, roads and sewers at Great Broughton, Cumberland, for N.E. Housing Association, Ltd. T. Nicholson (A.), 37, Washington-st., Workington. Quantities by T. Nicholson :—
Houses—*John Swiname, Brigham, Cockermouth.
Roads, etc.—*Nicholson & Wright, Cable-st., Lancaster.

Halifax.—Sub-stations at Nursery-ln., Backhold-ln. and Shroggs-rd., for T.C. D. T. Lloyd Jones, B.E., Crossley-st. :—*H. Baxendale & Sons, Ovenden, Halifax.

Hammersmith.—Works for new Town Hall, for B.C. :—Fibrous plasterwork, *G. Jackson & Sons, Ltd., Rathbone Works, Rainville-rd., W.6, £7,142; roof lights, etc., *Luxfer, Ltd., 16, Bonhill-st., Finsbury, E.C.2, £682 16s. 9d.

Hexham.—20 houses at Fourstones, for R.D.C. W. Dixon & Son, architects, Collingwood-st., Newcastle-on-Tyne :—*Johnston Bros., The Leazes, Burnopfield, £8,050

Heywood.—Club headquarters, Dawson-st., for Ex-Servicemen's Association. H. B. Bearon, architect, 9, Fleet-st., Bury :—*S. Barker, Ltd., Pilsworth-rd., Heywood.

High Wycombe.—Administrative and cubicle ward blocks at Booker Isolation Hospital, for the Board of Governors. Thurlow & Lucas, architects, 25, High-st., High Wycombe. Ernest R. Babbs & Sons, quantity surveyors, 40, St. James's-pl., S.W.1 :—Reinforced concrete floors, *Mono Concrete Co., Ltd., Millbank, S.W.1; artificial stonework, *Trent Concrete, Ltd., Colwick; metal windows, *Crittall Manufacturing Co., Ltd., High Holborn, W.C.1.

Houghton-le-Spring.—68 houses, for U.D.C. :—*Direct Labour.

Ireland.—Contracts placed by Commissioners of Public Works :—Bohermeen National school, Co. Meath (new school), M. Flynn, Fennor Oldcastle, Co. Meath; Ballythomas National school, Co. Wexford (improvements), P. Byrne, Aughrim, Co. Wicklow; Dublin Airport, Collinstown (hangar), Murphy Bros., Rathmines, Dublin; Gortskehi National school, Co. Mayo (improvements), J. Flynn Bros, Clonbur, Co. Galway; infirmary building, Royal Hospital, Kilmainham, Dublin (installation of hot-water heating apparatus), McCann, Ltd., Dublin; Lettermore National school, Co. Galway (improvements), J. F. McDonough, Leagoun, Moycullen; St. Joseph's (Lislea) National school, Co. Longford (improvements), M. Gormley, Pulladoey, Aughnacliffe, Granard, Co. Longford.

Kilkenny.—45 houses in Walkin-st., for Corporation :—*J. & P. Conlon, Carlow, £16,129.

Lancashire.—Junior and infants' school at Farington, nr. Preston, for C.C. J. C. Prestwich & Sons, architects, Bradshawgate-chambs., Leigh :—*J. Turner & Sons (Preston), Ltd., Preston, £20,107. (Subject to B. of E. approval.)

Lancashire.—Works for E.C. S. Wilkinson, County Architect. Pavilion, playing fields of Grammar School, Waterloo-with-Seaforth, Crosby :—*Tyson's (Contractors), Ltd., Liverpool, 5, £1,123; timber-framed temporary classrooms at Droylsden Moorside council school :—*Peter Conlan, Manchester, £1,159.

Langley Park.—86 houses, for N.E. Housing Assoc., Ltd. E. Simpkin, E. and S. :—*Wm. Rutherford, 70, Sea-rd., Fulwell, Sunderland, £32,190.

Leeds.—School for 480 senior girls, to be called Stainbeck Council school, on Carr Manor estate, for E.C. P. B. Haswell, B. Arch., A.R.I.B.A., architect. Quantities by Thos. Priestley & Sons, Leeds :—W. Ripley & Sons, Ltd., 128, West-st., Leeds, £30,940.

Leeds.—Office premises, South-parade and The Headrow, Leeds, 1, for Yorkshire Insurance Co., Ltd. Braithwaite & Jackman, architects, 7, South-parade, Leeds, 1. Quantities by the architects :—*Wm. Airey & Son (Leeds), Ltd., Eldon House, Woodhouse-ln., Leeds, 2.

Leeds.—Floor and wall tiling to nurses' home extension at St. James's Hospital. Kitson, Parish, Ledgard & Pyman, architects, Lloyds Bank-chambs., Vicar-ln. :—*The Leeds Marble & Heating Works, Ltd., 62, Woodhouse-ln., Leeds, 2.

Leeds.—Nurses' home at Killingbeck sanatorium, York-rd., for T.C. G. F. Bowman & Son, architects, 18, Park-row :—‡J. Tomlinson & Son, Globe Works, Water-ln, Leeds, 11.

Leigh.—Rebuilding "Eagle and Hawke" p.h., off Mather-ln. and Brunswick-st., for George Shaw & Co., Ltd., Leigh Brewery. E. Frankland, architect, Brewery Offices :—*T. Collier & Sons, Brown-st.-wks., Leigh.

Leyton.—Works at branch library, Harrow Green :—

Electric light installation—

Freeman Electrical Co., E.1. ...	£3,197	0	0
Highbury Electrical Co., N.7. ...	2,791	0	0
Ilford Electrical Co., Ltd., Ilford	2,694	3	6
Colston Electrical Co., Ltd., Bristol	2,572	15	8
Telephone & Electrical Maintenance Co., W.C.2	2,569	0	0
T. T. Reedy, Watford	2,523	0	0
Edgar C. Porter, Ltd., Ilford ...	2,505	0	0
E. Wight & Co., N.10	2,503	0	0
Evans & Shea, Ltd., Barking ...	2,461	6	0
Sibthorpe Bros., Ilford	2,450	12	11
Commercial Light, Heat & Power Co., W.1	2,439	10	0
G. Hopkins & Sons, Ltd., N.7 ...	2,430	0	0
Tyche, Ltd., W.2	2,400	0	9
Unilectric, Ltd., S.E.13	2,350	0	0
Tucker Bros., Hornchurch	2,320	0	0
Courtney, Pope, Ltd., N.15	2,280	0	0
Iverson Electrical, Ltd., N.W.6	2,251	0	0
Rashleigh, Phipps & Co., Ltd., W.1	2,225	0	0
City Electrical Co., Ltd., W.C.1	2,125	0	0
‡John Leech, E.11	2,039	18	6

Installation of hot-water heating apparatus—

Commercial Structures, Ltd., E.10	£4,095	0	
Steel & Co., Ltd. (Norman, Turner Engineering Branch), S.W.1	3,721	10	
B. Southell, N.3	3,285	0	
Clark, Hunt & Co., Ltd., E.1	3,285	0	
Watkin Heating Co., Ltd., Westcliff-on-Sea	3,227	0	
Fretwell Heating Co., Ltd., E.13 ...	3,097	0	
Freeman Heating Co., Ltd., W.1	2,948	0	
‡W. Richardson & Co., Ltd., S.W.1	2,810	0	
Hall, Matthew & Co., Ltd., N.W.1	2,628	0	

(Plus £240 prime cost items.)

Installation of lift—

Waygood, Otis, Ltd.	£547	0	
Express, Smith, Major-Stevens	474	0	
J. & E. Hall, Ltd.	460	0	
‡Marryat & Scott, Ltd.	451	10	

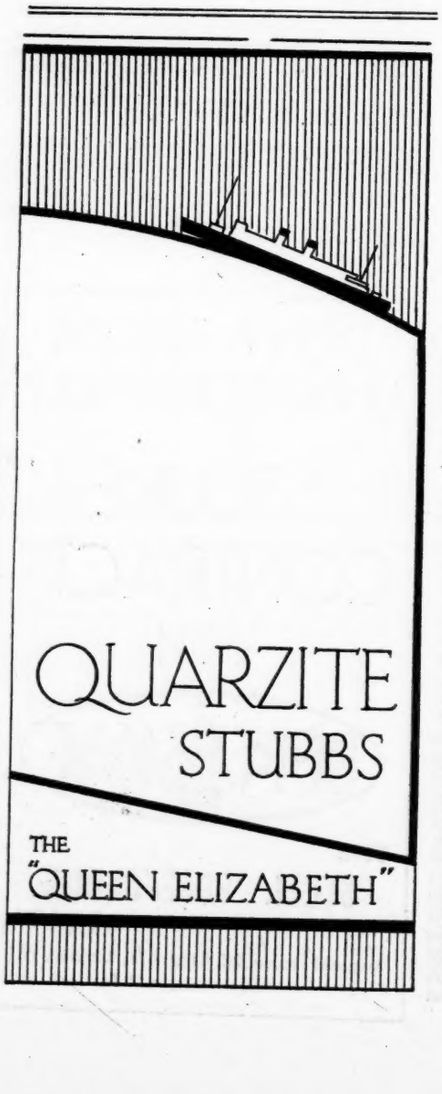
Windows and laylights, lanterns, etc.—

	Windows.	Laylights, Lanterns.
Haywards, Ltd.	£936 2 11	£814 4 0
Williams & Williams, Ltd.	931 3 8	962 19 11
Henry Hope & Sons, Ltd. ...	928 11 0	982 4 0
‡Luxfer, Ltd.	879 11 6	796 17 0
Crittall Manufacturing Co., Ltd.	860 4 2	919 6 6

Liverpool.—Works and offices, Speke, for Milners Safe Co., Ltd., 12-13, Newgate-st., London, E.C.1. Morter & Dobie, architects, 36, The Temple, Dale-st. :—Contractors, *W. Tomkinson & Sons, Liverpool, 3; steel decking and roofing, *Ruberoid Co., Ltd., London, W.C.1.

¶London (Air Ministry).—Contracts placed for the week ended October 29 :—Dyce—various buildings and external services—W. & J. R. Watson, Ltd., Edinburgh. St. Athan—underground cable scheme—Liverpool Electric Cable Co., Ltd., Bootle, Liverpool. Warrington—hutting and external services—J. Gerrard & Sons, Ltd., Swinton, Manchester. Cannock Chase—hutting and external services—Boulton & Paul, Ltd., Norwich. St. Athan and Cosford—enginering plant—Freeman Heating Co., Ltd., London, W.1. Hatfield Woodhouse—construction of station—Sir Lindsay Parkinson & Co., Ltd., London, W.C.2. Binbrook—construction of station—Sir Lindsay Parkinson & Co., Ltd., London, W.C.2. Harwell—builders' work—H. J. Goodall & Son, Ltd., Basingstoke. Newton—construction of station—Sir Lindsay Parkinson & Co., Ltd., London, W.C.2. Calshot—various buildings and external services—H. G. Ross & Sons, Ltd., Netley Abbey. North Dean—various buildings—John Laing & Son, Ltd., London, N.W.7. Kirton Lindsay—landing ground—Land Cultivators, Ltd., York. Lyme Regis—boat-house and various buildings—Stansell & Son (Taunton), Ltd., Taunton. Pembrey—internal wiring—Alpha Manufacturing & Electrical Co., Ltd., London, S.W.4.

¶London (H.M.O.W.).—Tenders accepted for week ended October 27 :—Chorley Royal Ordnance Factory—street-lighting lanterns, etc., Revo Electric Co., Ltd., Britannia Works, Tividale, Tipton. Heavy duty engine-driven pumping units, Tangyes, Ltd., Cornwall Works, Birmingham. Metal fittings for airmen's tables, Redfern Stevens, Ltd., Beverley Works, 177, Almer-st., Birmingham, 6, and F. W. Male & Son, Ltd., Cartwright-st., Wolverhampton. Leicester Station Sorting Office—extension, J. Chapman & Sons, Ltd., Knighton Junction, Welford-rd., Leicester. Airmen's boxes, Drake & Warters, Ltd., New Wells, Wakefield, and Hampton Timber Co., Ltd., Hampton. Moss Side State Institution, Maghull—erection of new connecting block and workshops, Harry Dowdle, Ltd., 162, Burscough-st., Ormskirk. Bridgend and Glascoed Royal Ordnance Factories—electrically driven plain grinding machines, The Churchill Machine Co., Ltd., Broadheath, nr. Manchester. Germoe (Cornwall) Telephone Exchange—erection, E. B. Wright, 58, Edgcumbe-av., Newquay. Blackburn Royal Ordnance Factory—air compressors and receivers, Reavell & Co., Ltd., Ranelagh Works, Ipswich. Chorley Royal Ordnance Factory—mechanical sifting machines, W. S. Barron & Son, Ltd., Bristol-rd., Gloucester. Bishopton Royal Ordnance Factory—erection of reconditioned saddle tank locomotive "Ashford," George Cohen, Sons & Co., Ltd., Stanningley Works, Stanningley, nr. Leeds. National Physical Laboratory, Teddington—extensions of creep laboratory and new engineering store, Davis Contractors, Ltd., 312, Kilburn High-rd., N.W.6. Tubular steel stretcher frames, S. Heath & Sons, Ltd., Leopold-st., Birmingham, 12, and Whitfields Bedsteads, Ltd., Watery-ln., Birmingham, 9. Gymnasium shoes, Dunlop Rubber Co., Ltd., Brook's-market, Holborn, E.C.1. Steel conduits and fittings, Bartons Conduits, Ltd., Beehive Works, Walsall; Walsall Conduits, Ltd., Excelsior Works, West Bromwich, and Longmore Bros., Springfield Steel Works, Mill-st., Darlaston. Oak dressing-chests, Waring & Gillow (1932), Ltd., 164-182, Oxford-st., London, W.1. Time-recording clocks and folding card racks, Gledhill-Brook Time Recorders, Ltd., Empire Works, Huddersfield. Electric-clock system, Gent & Co., Ltd., 47, Victoria-st., S.W.1. Canvas delivery hose, Geo. Angus & Co., Ltd., Bentham, Lancaster; The British Hose & Appliance Co., Ltd., Church-st., Pendleton, Manchester, 6; Lewis & Tylor, Ltd.,



Terminal House, Grosvenor-gdns., S.W.1; Merryweather & Sons, Ltd., Greenwich-rd., S.E.10; John Morris & Sons, Ltd., Salford, Manchester; Ravenhose, Ltd., Liverpool-st., Salford, 5; F. Reddaway & Co., Ltd., Pendleton, Manchester; Richards, Ltd., Broadford Works, Aberdeen, and Wm. Rose Hose Co., Ltd., Metropolitan Works, Oldfield-rd., Salford. **War Office**, Whitehall—internal painting and cleaning works, W. Chappell & Co., Ltd., 243, Elgin-av., W.9. Thornton (Blackpool) Telephone Exchange—erection—Herbert Joyce & Sons, Ltd., 55, Hove-rd., St. Annes-on-the-Sea. Telephone Repeater Station, Carlisle—extensions, James Millar & Sons, 15, London-rd., Carlisle. H.B.M. Embassy, Angora—steelwork, A. & J. Main & Co., Ltd., Vincent House, Vincent-sq., S.W.1. Hadleigh (Suffolk) Telephone Exchange—erection, Canler & Sons, 45-47, Jackson-rd., Clacton-on-Sea. Repair benches and loose cupboards, Drake & Warters, Ltd., Central Joinery Works, New Wells, Wakefield. Ministry of Agriculture Veterinary Laboratory, New Haw, Weybridge—gas-fired destructor, etc., The New Destructor Co., Ltd., Atlas Works, Pershore. Chorley Royal Ordnance Factory—H.E. shafting, Frank Wigglesworth & Co., Ltd., Shipley. Glascoed Royal Ordnance Factory—pumps, cylinders and pipework for inflammable store, S. F. Bowser & Co. (London), Ltd., 172, Buckingham Palace-rd., S.W.1. Mount Pleasant Letter Office—internal cleaning, F. W. Holleyman, 1, Church-rd., Barnes, S.W.13. Admiralty Research Laboratory, Teddington—jib crane, Herbert Morris, Ltd., Loughborough. Post Office Training School, Sydenham—alterations, F. J. Moreton & Son, Ltd., 171, Gipsy-rd., S.E.27. Royal Naval College, Greenwich, King Charles Block—heating and hot water services, The Brightside Foundry & Engineering Co., Ltd., 39, Victoria-st., S.W.1.

¶London (War Office).—Contracts placed during week ended October 27:—Hutted accommodation at Winterbourne gunner, W. E. Chivers & Sons, Ltd., Devizes. Ancillary buildings, Portland and Fort Agator, Ashford Builders Co., Ltd., Ashford, Middlesex. Alterations to regimental institute, Connaught Barracks, Dover, G. Lewis & Sons (Dover), Ltd., Dover. Ancillary buildings at Fort Wellington, John Hunt, Ltd., Gosport. Steelwork for vehicle shed, Bordon, London & Wales Construction Co., Ltd., London. Offices, R.O.F., Nottingham, John Cawley, Ltd., Nottingham. Ancillary buildings at Ryde and Totten, Brazier & Son, Ltd., Southampton. Mobilisation stores, etc., Burnett Village, Bristol, C. A. Hayes & Sons, Bristol. Steelwork at Nottingham, Geo. Sands & Sons, Ltd., Nottingham.

Longford.—20 cottages in Mostrim, for County Board of Health:—*T. Ledwith, £6,180 slated roofs and £5,780 tiles; Addie Burnett, £6,850 and £6,250; Keenan Bros., £6,800 and £6,000; Patk. Smyth, £6,587 and £6,487; John Killion, £6,552 and £6,432.

Macclesfield.—Garage and 'bus station at Waters Green, for North Western Road Car Co., Ltd., 120, Charles-st., Stockport. H. J. Starkey, architect, 15, Curzon-st., Mayfair, London, W.1.:—*G. Roylance & Co., Ltd., Waters Green, Macclesfield.

Marshland.—Houses, for R.D.C.:—Emneth, Fendyke-rd. (16 houses)—*W. Ferrar & Sons, Peterborough, £5,940. Marshland St. James, Smeeth-rd. (6 houses)—*F. Clarke & Sons, Walpole Highway, £2,165. Marshland St. James, Trinity-ln. (8 houses)—*F. Clarke & Sons, Walpole Highway, £2,870. Upwell New-rd. (6 houses)—*J. T. Cox & Sons, March, £2,350. Walpole St. Andrew, Marsh-rd. (6 houses)—*P. Wright, £2,228. Walpole St. Peter, nr. Chalk-rd. (8 houses)—*P. Wright, £2,960. West Walton, Fen End-ln. (12 houses)—*P. Wright, £4,500.

Middlesbrough.—Installation of electric lift at Borough Engineer's Dept., for T.C.:—*Pickerings, Ltd., Station-st., Stockton-on-Tees.

¶Milford Haven (Admiralty).—Railway works:—*Nott, Brodie & Co., Ltd., 60, Queen-sq., Bristol.

Morpeth.—Rebuilding of large block of property in High-st. into shops and offices, etc., for —. Sanderson:—*R. Carse & Sons, Oldgate, Morpeth.

Narberth.—Pair of houses at Llandissilio, nr. Clynderwen, for R.D.C. J. Owen Parry & Lewis, architects, Ammanford:—

Dan T. Phillips, Clynderwen, Carm.	£880
*W. L. Davies, Robeston Wathen, Narberth, Pem.	790

Newcastle-upon-Tyne.—Rebuilding Taylor Dunford's leather works, Barrack-rd. P. L. Browne, Son & Harding, architects, Pearl-bldgs.:—*James Lunn & Sons, St. Mary's-pl., Newcastle.

Newcastle-on-Tyne.—Works, for City Council:—Painting at Elswick Grange—*Stephenson & Co., Newcastle, £199. Heating installation at workshops, etc., at Municipal Airport—*J. T. Leake & Co., Ltd., Newcastle, £135. Electric lighting at hangar at Municipal Airport—*Falconer Cross & Co., Ltd., Newcastle, £177. Painting at Barrasford Sanatorium—*J. W. Renwick, Ltd., Newcastle, £516. Reinforced concrete floor and apron at new hangar at Municipal Airport at Wolsington—*J. R. Rutherford & Sons, Minories, Jesmond, Newcastle. Cost, £3,550.

Newcastle-on-Tyne.—New Church of the Divine Unity, Ellison-pl. and Oxford-st. Cackett, Burns Dick & MacKellar, architects, 21, Ellison-pl.:—*J. & W. Lowry, Corporation-st., Newcastle-on-Tyne.

Newcastle-upon-Tyne.—Works, for T.C. City Architect, 18, Cloth Market—

150 houses, Longbenton housing estate—

Middlemiss Bros., Ltd., Newcastle-upon-Tyne	£90,852 0 0
Wm. D. Allison, Whitburn, near Sunderland	67,648 0 0
North-Eastern Estates Development Co., Ltd., Newcastle-on-Tyne	64,585 0 0
*Gustavus Bailey, Ltd., 57, Westgate-rd., Newcastle-upon-Tyne	64,585 8 5

Reconstruction to form 76 flats, St. Lawrence-sq. flats—

J. & W. Lowry, Newcastle-upon-Tyne	£13,405
Middlemiss Bros., Ltd., Newcastle-upon-Tyne	12,790
Alex. Anderson (Contractors), Ltd., Newcastle-upon-Tyne	10,450
*Fred P. Dodsworth, Hill Heads-rd., Whitley Bay	10,347

Newcastle-under-Lyme.—Lavatory accommodation, Silverdale cemetery. A. Cotton, M.Inst.M. & Cy.E., Borough Surveyor, Nelson-pl.:—

G. W. Hamner, Silverdale	£287 0 0
G. Rowe & Son, London	276 0 0
Lockwood & Sproston	266 0 0
Hedley & Weightman	246 2 3
Madew & Wardle	236 0 2
Phillips Bros. (Silverdale), Ltd., Silverdale	227 10 0
†Joseph Jones (Newcastle, Staffs), Ltd., Liverpool-rd., Newcastle	225 0 0

(Rest of Newcastle.)

Newcastle (Staffs).—Works for T.C.—Additions and alterations to Hassell-st. council school:—*Madew & Wardle, Central-wks., £9,043 9s. 1d.; Cleansing and lavatory accommodation at Newcastle Gas works:—

Madew & Wardle, Central-wks.	£858
Joseph Jones (Newcastle, Staffs), Ltd.	849
Thos. Hughes	403
Turner & Richards	372
Hedley & Weighman	350
*G. Rowe & Son	350

(All of Newcastle.)

Newmarket.—Conversion, alterations and additions into 2 shops at High-st. J. W. Hammond, (L.), architect, 20, North-st., Romford:—*Rooke & Sons, Ltd., Saffron Walden.

North Shields.—Block of shops, Saville-st., for Montague Burton, Ltd., Hudson-rd. Mills, Leeds. N. Martin, Staff Architect:—*Hastie D. Burton, Ltd., King-st., North Shields.

Northampton.—Works, for C.C. G. H. Lewin, F.R.I.B.A., County Architect, County Hall, Northampton. Quantities by the County Architect:—

Bugalow building at Rushden House Sanatorium—

T. Swindall & Sons, Rushden	£5,669 0 0
A. P. Lewis & Sons, Ltd., Burton Latimer	5,614 0 0
R. Marriott, Rushden	5,379 19 7
E. Brown & Son, Ltd., Wellingborough	5,332 0 0
Richmonds, Corby	5,294 16 0
A. Sanders, Ltd. Rushden	5,247 17 0
W. Thompson & Sons, Ltd. Irthlingborough	5,214 0 0
*Childs & Co., Finedon	5,100 0 0

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A. P. Lewis & Sons, Ltd., Burton Latimer	£11,090 0
O. P. Drever & Son, Ltd., Kettering	10,960 0
C. Adams & Co., Wellingborough	10,793 0
Sturgess & Co., Ltd., Kettering	10,076 0
W. Thompson & Sons, Ltd., Irthlingborough	9,740 0
J. E. Dawkins & Sons, Desborough	9,681 0
Richmonds, Corby	9,438 18
Douglas Drever, Kettering	9,376 0
E. Brown & Son, Ltd., Wellingborough	9,316 0
Kettering Co-operative Society, Ltd., Kettering	9,264 0
Loakes & Pettit, Ltd., Thrapston	9,185 0
‡A. Tailby & Son, Ltd., Desborough	8,943 15

Offaly.—94 cottages, for County Board of Health:—

Ennis Bros., Mullingar	£42,200
Kelly & Sons, Tyrrellspass	39,690
*J. Fitzpatrick, Portlaoighaise	33,950

Oldham.—Gymnasium and practical block, Clarksfield Council School, for E.C. J. W. Hitching, schools architect, Education Offices:—Excavator, drainer, concreter and bricklayer, *J. Hartley; mason, *S. & J. Whitehead, Ltd.; carpenter and joiner, *E. Whittaker, Ltd.; plumber and glazier, *J. Airey; plasterer, *S. Robinson, painter, *W. B. Scott & Co., Ltd. (All of Oldham.)

Ossett.—Dairy and warehouse, Kingsway, for Ossett Industrial Co-operative Society, Ltd., Dale-st. W. Watson, architect, Pickersgill-st.:—*R. Tolson & Sons, Birchen Hills, Headlands, Ossett, nr. Wakefield.

Pontefract.—Factory, Pontefract-rd., Ferry Bridge, for Robinson & Wordsworth (1925), Ltd., Victoria-wks. Pennington, Hustler & Taylor, architects, Ropergate:—*A. Askam & Son, Westfield-av., Pontefract.

Port Talbot.—Chapel, for Noddfa Welsh Congregational Chapel Trustees. T. Edmund Rees, F.I.A.A., architect, of Johnson, Richards & Rees, Merthyr Tydfil:—*A. J. Maggs, Ltd., 64, Talbot-rd., Port Talbot.

¶Portsmouth (Admiralty).—Hot and cold water services in 3 timber-framed buildings, R.N. Barracks:—

G. N. Haden & Sons, Ltd., Bournemouth.

Preston.—Works at X-ray department at Sharoe Green Hospital, for T.C.:—Heating and ventilation, *C. Seward & Co., Ltd., £365; precast floor beams, *Bolton & Hayes, Ltd., £208 13s. 3d.; metal windows, *Williams & Williams, £571 8s. 4d.

Redditch (Worcester).—Works in Windsor-rd., for High Duty Alloys, Ltd., Buckingham-av. trading estate, Slough, Bucks. Col. A. L. Abbott, architect, Queen Anne's-gate, Westminster, London, S.W.1:—*S. J. Smith (Bidford), Ltd., 174, Corporation-st., Birmingham, 4.

Reigate.—Offices at refuse disposal works, for T.C.:—

Weald Homesteads, Ltd., Earlswood	£1,335 0
G. F. Mackreill, Redhill	1,277 0
J. Crewdson, Horley	1,250 0
G. W. Smith, Horley	1,210 0
C. Payne, South Park	1,158 0
Frank C. Gregory, London	1,138 0
Pink & Oram, Merstham	1,106 0
Bishop & Clarke, Ltd., Horley	1,105 0
*W. C. Brown, Earlswood	909 15

Scarborough.—Exterior painting of Barry's Cottages, Seamer-rd., for T.C. H. V. Overfield, B. and Water E.:—*E. Timmins, 50, Highfield, Scarborough.

Scunthorpe.—Highway depot, Station-rd., for T.C. W. Farrar, B.S.:—*G. W. Green, Bottesford-rd., Ashby, Scunthorpe, £3,594.

South Shields.—Bakery extensions, Wrekendyke-ln., for T. Holman, baker. F. W. Newby, architect, 37, King-st.:—*John Christie, Nile-st., South Shields, £1,700.

Stamford.—Rebuilding Thornhaugh Hall, nr. Stamford. F. J. Lenton (F.), architect:—*Bowman & Sons, Stamford.

Stockton-on-Tees.—Works, for T.C. A. S. Knolles, B.E.:—Mortuary—*G. Fordy & Son, Boathouse-ln., Stockton, £670. Concrete flooring and roofing for new garage and storeroom at Richmond-st. depot—*Brandesburton Gravel & Concrete Co., Hull, £328.

Stourbridge.—Junior and infants' school at Hagley, for Worcestershire E.C. A. V. Rowe, County Architect, 38, Foregate-st., Worcester:—*Meredith & Hingley, Ltd., Furlong-ln., Cradley Heath, £8,865 3s.

Stourport.—Reconstruction and additions to the "Seven Trow" p.h., High-st., for Mitchells & Butlers, Ltd., Cape Hill Brewery, Smethwick. Pritchard, Godwin & Clist, architects, Bank-chams., Kidderminster:—*H. J. Aimes & Sons, Ltd., Melbourne-st., Wolverhampton.

Stretford.—Works on new senior school at Lostock, for T.C.:—Building—*G. H. Godfrey & Son, Ltd., Gorton, £21,050; asphalting—*Bituminous Surfacing, Ltd., Manchester, £1,060 17s. 6d.; heating—*Saunders & Taylor, Ltd., Trafford Park, £2,298; wood block flooring—*J. Gerrard & Sons, Ltd., Swindon, £903 16s. 5d.

Sunderland.—20 houses, for R.D.C.:—*G. McCall, New Herrington.

Sunderland.—56 houses at Ryhope, for R.D.C. E. Hitchen, S., The Esplanade, Sunderland:—*A. V. Clerey & Son, Frederick-st., Sunderland. (Accepted subject to M.H. approval.)

Thrapston (Northants).—Church hall, adjoining infants' school in High-st., Woodford, for Parochial Council of Woodford Parish Church, Talbot, Brown & Fisher, architects, "Burystead," Wellingborough:—†C. Adams & Co., Finedon-rd., Wellingborough.

Tipton.—404 houses, Upper Church-ln. estate, section 2, for U.D.C. Charles R. Gallie, A.R.I.B.A., Housing Director:—*W. Whittingham, Ltd., 57, Victoria-st., Wolverhampton.

Tottenham.—Painting of old destructor building, for T.C.:—*Borough Engineer, £430.

Tynemouth—Works, for T.C.:—Gymnasium at Linskill senior school:—*B. Peel, Ltd., East Mill Works, North Shields. (About £6,000). Painting houses—*J. Hogg, Tynemouth, £570, and *R. S. Johnston, Tynemouth, £236.

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Tynemouth.—Conveniences at Plaza, for Tynemouth Galaland, Ltd. W. Stockdale, architect, 73, Howard-st., North Shields:—*Direct Labour, £1,300.

Walsall.—Warehouse, Birchills, for John Smith, Ltd., Richard-st., Birmingham, 7:—*Housing, Ltd., Station-st., Blackheath, Birmingham.

Walthamstow.—Improvements at central kitchen for T.C.:—‡J. & R. Rooff, Ltd., £1,917 6s. 4d.

Walthamstow.—Additional accommodation, refreshment room, etc., at Whipps Cross bathing pool, for T.C.:—

Commercial Structures, Ltd. ...	£10,193	0	0
Barvis Partners, Ltd.	9,444	1	0½
Maroulis, Nicholls & Brown, Ltd.	8,844	14	5
F. J. Coxhead	8,736	17	0
Thomas Bates & Sons, Ltd. ...	8,373	6	6½
‡W. J. Cearns, Ltd.	7,974	7	1

Wandsworth.—Works, for B.C.:—Demolition of properties 6, 8, 10, 12, 14, Shoreham-st., 1 and 2, Providence-pl., 13, Ram-sq., and Salvation Army hut, York-rd.—*Wackett Bros., £77. Interior painting works at 1-71 (odd) and 2-40 (even), Lidiard-rd., Magdalen Park estate, and 47-161 (odd), Southcroft-rd., Furzedown housing estate—*H. & P. Matthews, £838. Demolition of 1-12, Triangle-pl., 1-6, Wallis-court, 1-5, Newman's-court and 1-4, Little Pleasant-pl.—*St. Mary's Demolition & Excavation Co., Ltd., £145. Internal painting, etc., works at Clapham Baths—*Crabb & Son, Ltd., £208.

Wellington.—44 houses at Parkdale, Hadley, for R.D.C. James Hickman & Son, architects, Market-st.:—*L. Bates, Wolstanton, Stoke-on-Trent, £17,800.

West Bromwich.—Shops, residential estate, Holyhead-rd., Hilltop, for Harford Kingham & Co., 339, High-st.:—*R. Perkins (Smethwick), Ltd., 212, Bromford-ln., West Bromwich.

West Malling.—Third section of extensions to Leybourne Grange Mental Defectives Colony, for Kent C.C. W. H. Robinson, County Architect, Springfield, Maidstone:—*J. A. Davidson, High-st., West Malling.

Wexford.—28 houses:—*H. & A. Hamilton, £13,616.

Weybridge.—Airplane flight shed and aerodrome, for Vickers (Aviation), Ltd., Brooklands-rd. C. Howard Crane, architect, Romney House, Marsham-st., S.W.1:—Foundations and preliminary works, *Wates, Ltd., 1258, London-rd., Norbury, S.W.16.

Whitehaven.—Rebuilding about 100 sq. yds. of the wall adjoining Low-rd. at new cemetery, for T.C.:—*Direct Labour, £160.

Wigan.—Block of new offices and shops in King-st., for Royal London Mutual Insurance Society, Ltd., George's Dock-bldg., Liverpool, 2. Johnson, Lowe & Tate, architects, 23, King-st.:—*Clough & Gaskell, Ltd., Wigan.

Witham.—Branch premises, High-rd., for Barclays Bank, Ltd., 54, Lombard-st., E.C.3. Elliott, Archer & Marsh, architects, 29, Bedford-row, W.C.1:—*Henry Potter (William Sharpe), Ltd., Fairfield-wks., Chelmsford.

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Gibson & Co., Ltd.	277 5
Haywards, Ltd.	231 0
*Shutter Contractors, Ltd.	202 0

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*British Art Tile Co., Ltd.

Wall and floor tiling, Electricity Offices, Powis-st.:—

Chas. Walker & Co.	£154 5 0
Conway & Co.	147 10 7
*F. & E. Eastman	117 19 2

Worcester.—Conversion of cinema into business premises, for Hardy & Co., Newcastle. J. M. Fatkin, architect, 17, Bigg Market, Newcastle-on-Tyne:—*Jos. Wood & Sons, Westwood.

Worcester.—Factory at Northwick, for Russell & Dorrell, College-st. Sir John Brown & A. E. Henson, FF.R.I.B.A., architects, St. Giles-st., Northampton:—*Brotram, Ltd., London.

Worcestershire.—Works for E.C.:—New gymnasium and cycle accommodation at King Charles I Grammar School, Kidderminster—‡A. H. Guest, Ltd., Stourbridge, at £4,863; school for 160 juniors and infants at Hagley—‡Meredith & Hingley, Cradley, £8,685.

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